



15 September 2011

AIR QUALITY IMPACT ASSESSMENT

Port Spencer

Submitted to:
Centrex Metals Ltd
Unit 1102
147 Pirie Street
ADELAIDE SA 5000

REPORT

Report Number. 107661001-071-R-Rev0

Distribution:

1 Copy - Centrex Metals Ltd
1 Copy - Golder Associates Pty Ltd





Record of Issue

Company	Client Contact	Version	Date Issued	Method of Delivery
Centrex Metals Ltd	Alison Evans	Revision A	01/09/2011	Electronic
Centrex Metals Ltd	Alison Evans	Revision 0	15/09/2011	Electronic



Table of Contents

1.0 INTRODUCTION	1
2.0 PROPOSED DEVELOPMENT	2
2.1 Product Delivery	2
2.2 Product Shipment	2
2.3 Utilities	2
3.0 EXISTING CONDITIONS	3
3.1 Climate	3
3.2 Meteorology	3
3.2.1 Temperature	3
3.2.2 Rainfall	4
3.2.3 Wind	4
3.2.4 Existing Sources	7
3.3 Background Air Quality	7
3.4 Sensitive Land Uses	8
4.0 METEOROLOGICAL MODELLING	9
4.1 Available Data	9
4.2 Prognostic Meteorological Model	10
4.2.1 Model Configuration	10
4.2.2 Validation	11
5.0 EMISSIONS TO AIR	15
5.1 Worst Case Dust Generation	17
5.2 Assessment Criteria	17
6.0 DISPERSION MODELLING	18
6.1 Atmospheric Dispersion Model – AUSPLUME	18
6.2 Meteorology	18
6.3 Discharge Parameters	18
6.3.1 Point Sources	18
6.3.2 Volume Sources	19
6.4 Overview	19
7.0 RESULTS	21
8.0 DISCUSSION	25



9.0 LIMITATIONS 26

10.0 ABBREVIATIONS 27

11.0 REFERENCES..... 28

TABLES

Table 1: Sensitive Receptor Locations 8

Table 2: Emission Sources..... 15

Table 3: AAQ NEPM Schedule 2 Standards and Goals 17

Table 4: Model Input Data: Point Sources 19

Table 5: Model Input Data: Volume Sources 19

Table 6: Maximum Predicted Ground Level Concentrations – All Sensitive Receptors 24

Table 7: Maximum Predicted Incremental Ground Level Concentrations - Individual Sensitive Receptors (Hematite and Grain)..... 24

FIGURES

Figure 1: Monthly Average Maximum and Minimum Temperatures - Port Lincoln Automatic Weather Station 3

Figure 2: Monthly Average Rainfall - Port Lincoln Automatic Weather Station..... 4

Figure 3: Annual and Seasonal Wind Roses - Port Lincoln Automatic Weather Station 2008 6

Figure 4: Site and Nearest Sensitive Receptors..... 9

Figure 5: Annual and Seasonal Wind Roses for Observed Meteorological Data Cleve Automatic Weather Station 2008 12

Figure 6: Annual and Seasonal Wind Roses for The Air Pollution Model (Version 4) Synthesised Meteorological Data at Cleve 2008..... 13

Figure 7: Annual and Seasonal Wind Roses for The Air Pollution Model (Version 4) Synthesised Meteorological Data Vs Observed Meteorological Data at Port Spencer 14

Figure 8: Site Lay-out and Emission Sources 20

Figure 9: Maximum Predicted PM₁₀ GLC (µg/m³ 24 hour average) 21

Figure 10: Maximum Predicted PM_{2.5} GLC (µg/m³ 24 hour average) 22

Figure 11: Maximum Predicted PM_{2.5} GLC (µg/m³ annual average) 23

APPENDICES

APPENDIX A

Emission Rates

APPENDIX B

Dispersion Modelling

APPENDIX C

Limitations (LEG04, RL1)



1.0 INTRODUCTION

Centrex Metals Limited (Centrex) proposes to develop a deep water marine port facility on the Eyre Peninsula, South Australia, to accommodate export of iron ore. Port Spencer (the Port) facility will be developed as a multi-user bulk commodities port over four stages. Stage 1 is the development of the Port, including wharf and storage areas for hematite and grain. Stage 2 will involve the export of magnetite and Stages 3 and 4 will involve the expansion of magnetite storage areas.

This report assesses the air quality impacts associated with the Stage 1 Port operation. The main air quality impact associated with Stage 1 operation is particulate matter emissions associated with the transport and handling of grain and ore at the Port. For the assessment particulate matter with aerodynamic equivalent diameters less than 10 micrometres (PM_{10}) and less than 2.5 micrometres ($PM_{2.5}$) is assessed.



2.0 PROPOSED DEVELOPMENT

The Port will be located on Eyre Peninsula, South Australia, approximately 21 km north-east of Tumby Bay, approximately 70 km north of Port Lincoln and 225 km east of Adelaide. The Stage 1 development will include grain and hematite storage, grain and hematite out-loading, ship loading facilities and associated infrastructure. Stage 1 is expected to handle up to two million tonnes per annum of hematite and one million tonnes per annum of grain to be exported to domestic and global markets.

2.1 Product Delivery

Dry product (grain and hematite) will arrive at the Port via B Double or Triple road trains via a sealed road (Swaffers Road). The products will be unloaded in dedicated out-load hoppers that will be fitted with dust extraction units to reduce fugitive dust emissions. The products are then transferred to storage sheds via sealed conveyors.

The hematite storage shed will be fitted with a dust collector and operate under negative pressure to minimise fugitive dust emissions.

The grain storage shed will be sealed and utilise dust collectors on all grain handling processes within the shed.

2.2 Product Shipment

During Stage 1 it is expected that 35 Panamax type vessels per year will be required to ship product (1 vessel every 10 days). Ship loading will be conducted via one 4,500 t/h dedicated ship loader for hematite and one dedicated ship loader for grain. The out-loading conveyors will be sealed and fitted with dust collectors on all transfer points to minimise fugitive dust emissions. The ship loaders will also have dust controls in place.

2.3 Utilities

A 5 MW diesel fuelled generator will be utilised on site to provide for power requirements.



3.0 EXISTING CONDITIONS

This section discusses the local topography and meteorology, which are important considerations in terms of the dispersion of emissions to air, likely background atmospheric contaminant concentrations, and the proximity of sensitive receptors to the site.

3.1 Climate

The proposed site of the Port is located approximately 70 km north of Port Lincoln in the Western Agricultural district of South Australia.

The general climate classification of the area is temperate, characterised by dry, hot summers and wet winters. Due to the coastal location of the site, the climate and characteristics will be similar to the nearest Bureau of Meteorology (BoM) Automatic Weather Station (AWS) located at Port Lincoln, 70 km south of the Port.

3.2 Meteorology

The existing meteorology is described in the following section.

3.2.1 Temperature

The annual mean maximum temperature for Port Lincoln is 21.1°C, whilst the annual mean minimum temperature is 11.3°C. Maximum and minimum monthly average temperatures, using data measured at Port Lincoln AWS is shown in Figure 1.

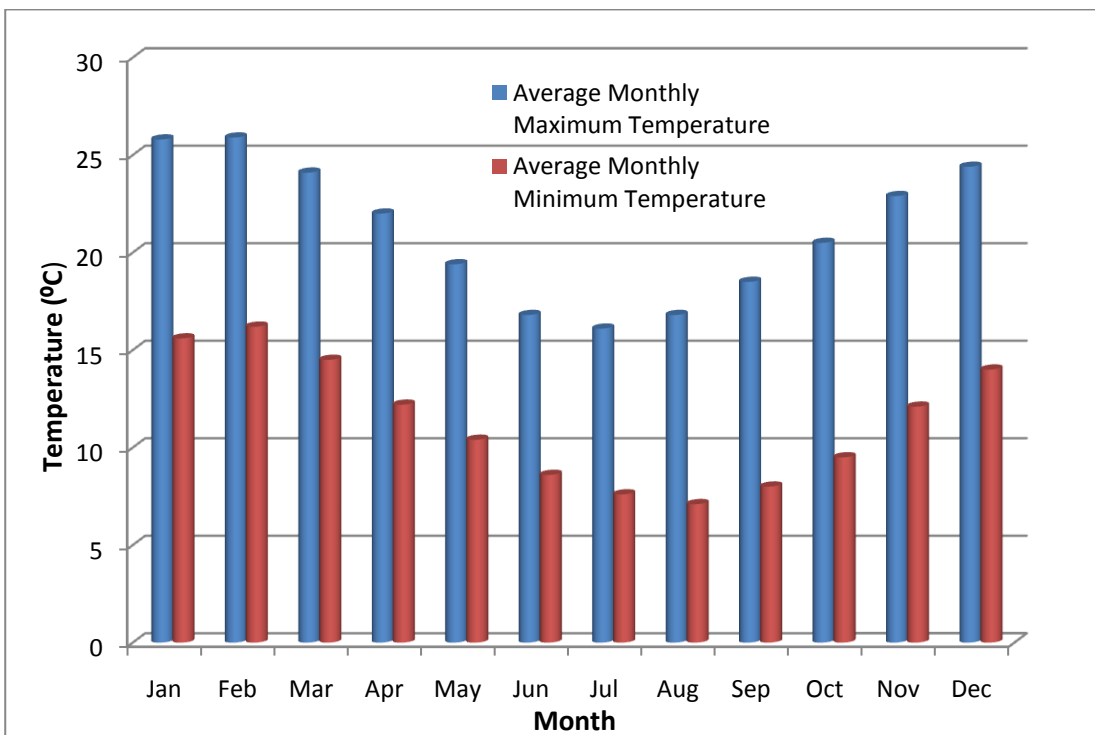


Figure 1: Monthly Average Maximum and Minimum Temperatures - Port Lincoln Automatic Weather Station



3.2.2 Rainfall

Average annual rainfall at Port Lincoln AWS is 384.7 mm with the majority falling over the wetter winter and spring months. The temperate coastal location means it experiences more rainfall than inland locations, on average there are 66.4 rain days per year. Figure 2 shows average monthly rainfall for Port Lincoln AWS and indicates a maximum of 61.4 mm in July and a minimum of 11.6 mm in February.

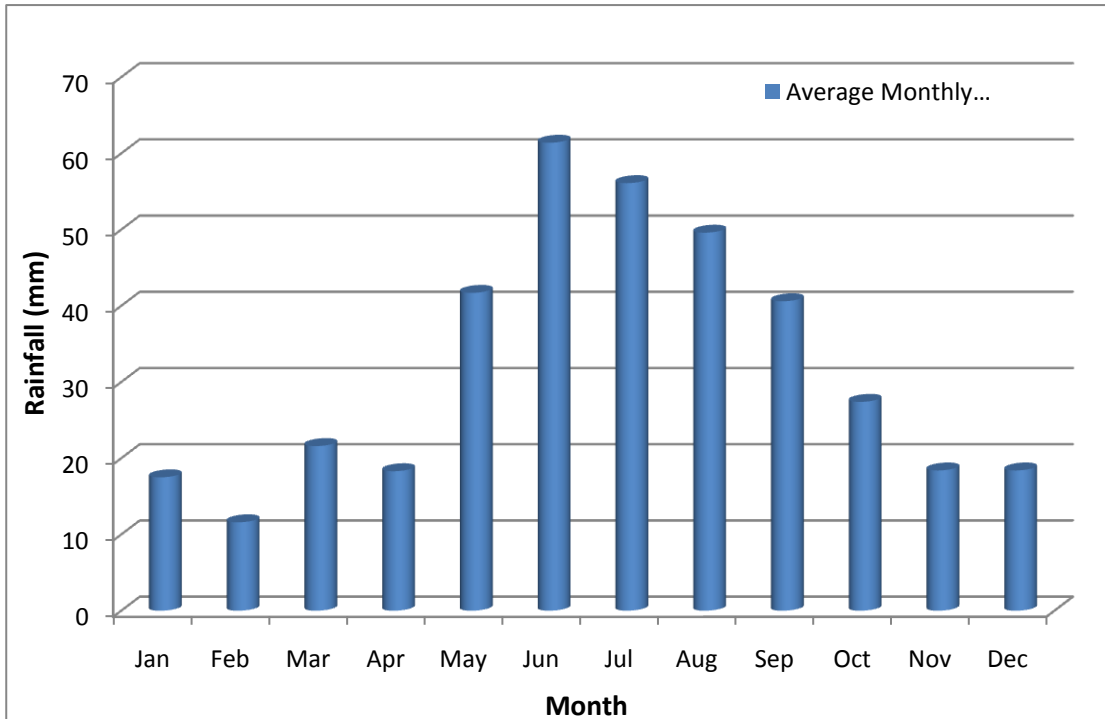


Figure 2: Monthly Average Rainfall - Port Lincoln Automatic Weather Station

3.2.3 Wind

The meteorology of the area is complex, with sea breezes, land breezes, and high ground to the west all interacting with regional scale winds. The coastal location typically lends to high wind speeds increasing in the afternoon. Overall a diurnal pattern in wind directions and strength is illustrated by lighter inland winds in the morning, shifting to stronger sea breezes in the afternoon.

Local wind climate largely determines the pattern of off-site or site specific pollutant dispersion. The characterisation of local wind patterns requires accurate site-representative hourly recordings of wind direction and speed over a period of at least a year. The nearest weather station that measures wind speed and direction is Port Lincoln (BoM, AWS) which has been operating since 1992. There is very little intervening topographical features as the surrounding area has very low topography and both sites are mainly influenced by their coastal locations. Therefore Port Lincoln measurements can be considered to provide site-specific climatic data for the Port site.

The effect of wind on pollutant dispersion can be examined using general wind distribution, most readily displayed by means of wind rose plots, giving the incidence of winds from different directions for various wind speed ranges. The annual wind rose for the period January 1 to December 31 2008 is shown in Figure 3, indicating that the predominant wind directions are from the south through to the east and north-west through to the west, with an annual average wind speed of 5.35 m/s and 2.69% of calms.



The seasonal nature of the wind climate for Port Lincoln can also be seen in Figure 3 where:

- The winds are almost exclusively from the south-east in the summer, representing the sea breeze with the greater incidence of higher wind speeds
- Conversely winter shows winds ranging from the north-west through to the west
- Spring and autumn show a higher distribution of winds through the east and west, reflecting the transitional change of seasons



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

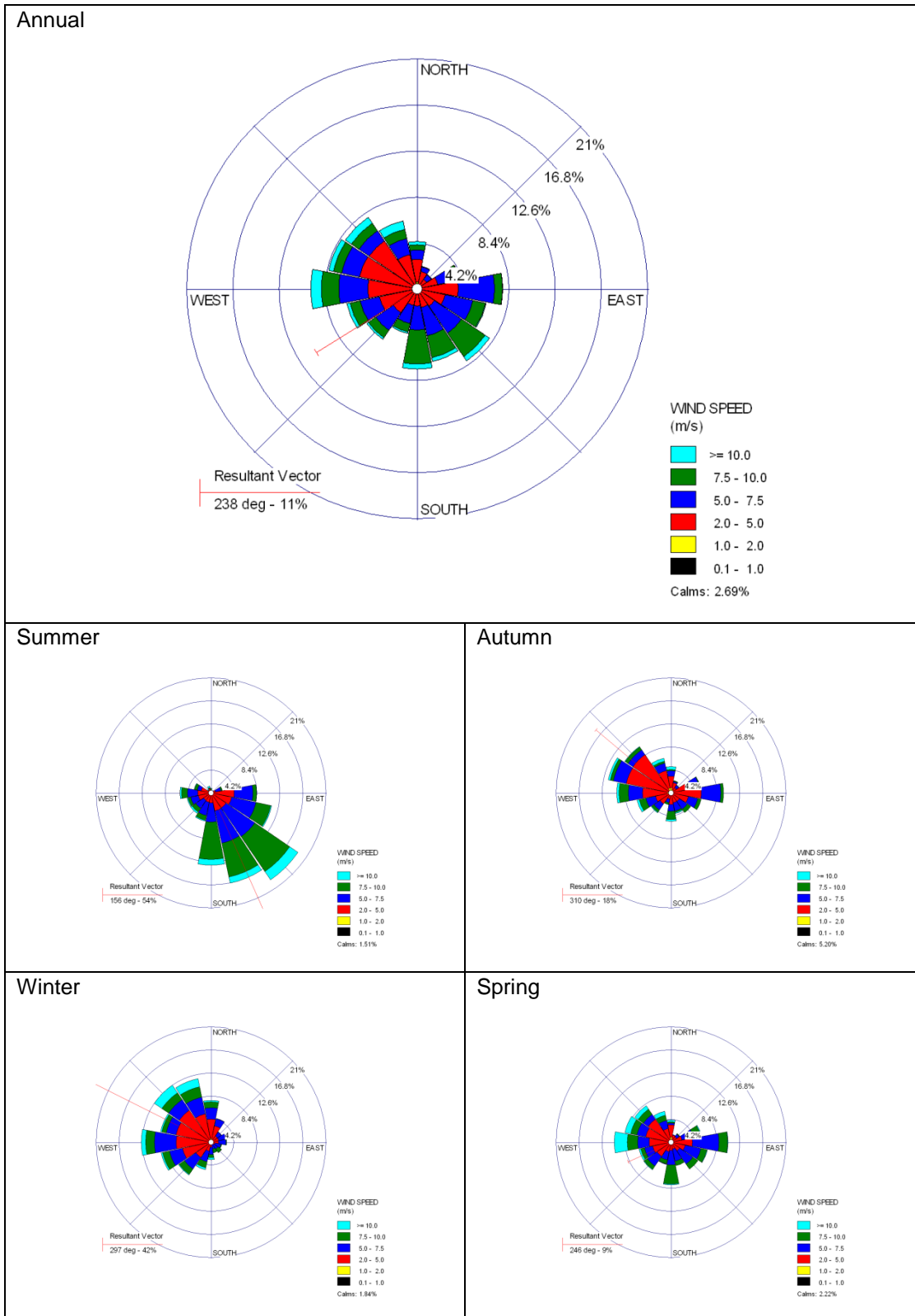


Figure 3: Annual and Seasonal Wind Roses - Port Lincoln Automatic Weather Station 2008



The seasonal influence of high winds (>5 m/s) is greatest in summer, and lowest in autumn. The incidence of light winds (< 2 m/s) is greatest in autumn, followed by spring and the least in summer.

3.2.4 Existing Sources

Baseline air quality may be broadly determined by the limited number and type of local industries in the area of the Port site. The site is predominately greenfield and the surrounding area is exclusively agricultural.

Anthropogenic sources of dust in the region include the following:

- Motor vehicle exhausts
- Industrial processes
- Heating and power generation
- Stock movements
- Fuel reduction burning.

Natural sources of dust in the region include the following:

- Wind erosion
- Bushfires initiated by lightning strikes.

Regional industry in the area is heavily focused on agriculture, with some power generated by diesel engines at cattle stations. However there is little urbanisation in the Port area, and the fine particulate matter from combustion engines is not produced in great quantities.

The major source of particulate matter in the region is wind eroded dust. Larger eroded dust particles tend to settle out, leaving finer particles of less than 10 microns to represent the majority of dust entrained in the atmosphere over long distances.

3.3 Background Air Quality

The assessment of air quality impacts must incorporate existing air quality in the vicinity of the Port emission sources. Existing air quality is dependent on the type and number of other emission sources in the area and is usually determined from the results of ambient air quality monitoring.

The South Australian Environment Protection Authority (EPA) operates a network of nine ambient air quality monitoring stations (AAQMS). Of these stations, the closest to the site is located in Whyalla (Waltz Street and Shultz Street) and Port Pirie (Oliver Street), 250 km north-east of the site. The remaining network sites are located in and around Adelaide. Centrex has also conducted a PM₁₀ air quality monitoring programme at their Wilgerup mine site from 4 June 2009 to 8 March 2010. The Wilgerup mine site is located approximately 70 km north-west of the proposed Port.

In the absence of site-specific data, the Wilgerup mine site dataset was used to calculate constant PM₁₀ and PM_{2.5} concentrations to represent existing air quality. The data set comprises approximately nine months of data including the summer period, which would typically exhibit higher PM₁₀ concentrations. A time varying background was not considered appropriate due to the distance between the Port and the AAQMS.



The South Australian EPA provides no guidance on the method to be used to derive background PM₁₀ and PM_{2.5} concentrations from observed data. The Victorian *State Environment Protection Policy (Air Quality Management)* [7] stipulates that, where no appropriate hourly background data exists, the 70th percentile of one year's observed hourly concentrations as a constant value must be added. Where a 24 hour averaging time is used in the model, the background data must be based on 24 hour averages. The background concentration used to assess PM₁₀ was assumed to be equal to the 70th percentile of the 24 hour averaged 2009-2010 Wilgerup mine dataset. This represents a background PM₁₀ concentration of 14 µg/m³. Concentrations of PM_{2.5} in urban environments are approximately 40% of PM₁₀ concentration. In the absence of PM_{2.5} background data, it was conservatively assumed that the representative PM_{2.5} background concentration was equal to 50% of the PM₁₀ concentration; 7 µg/m³.

Where an annual averaging time is used in the model (in this case for PM_{2.5} only), the background data must be based on an annual average. The average PM₁₀ concentration of the Wilgerup mine 2009-2010 dataset is 13 µg/m³. In the absence of PM_{2.5} background data, it was conservatively assumed that the representative annual average PM_{2.5} background concentration was equal to 50% of the PM₁₀ concentration: 7 µg/m³.

3.4 Sensitive Land Uses

Inspection of aerial imagery identified locations that would be sensitive to potential PM₁₀ and PM_{2.5} impacts within the 25 km² study area. Sensitive receptors include land uses, such as the following:

- Residences (either isolated or in clusters)
- Hospitals
- Schools
- Day-care centres
- Public open space
- Aged care facilities.

The Port is located in a rural area, consequently the main sensitive receptors are considered to be residences in the area. Table 1 lists the nearest sensitive receptors in the study area and their relative position to the Port. Figure 4 shows the location of the selected sensitive receptors.

Table 1: Sensitive Receptor Locations

Sensitive Receptor	UTM Co-ordinates	Distance from the Port (km)	Direction from the Port
1	616063, 6210808	1	North
2	614615, 6210260	2	West
3	613977, 6211372	3	North-west
4	613277, 6208896	3.5	South-west
5	612459, 6211089	4.5	North-west



4.0 METEOROLOGICAL MODELLING

4.1 Available Data

The simulation of air quality impacts from the Port site requires the use of hourly site representative meteorological data spanning an entire calendar year.

Limited meteorological data is available from the Port site. A meteorological station installed at the Port site provided data for the months of July, August and December 2010 and January, February 2011 or part thereof. Other local sources of meteorological data include the BoM sites at Cleve, Cummins and Port Lincoln. However these measurements of wind, temperature and, in isolation, were not suitable for direct use with the pollutant dispersion assessment due to differences in geography and the distance between the meteorological stations and the Port site. Whilst the wind direction distribution and speeds may be comparable, site specific variability over these distances could lead to under or over prediction of ground level concentrations from the dispersion model.

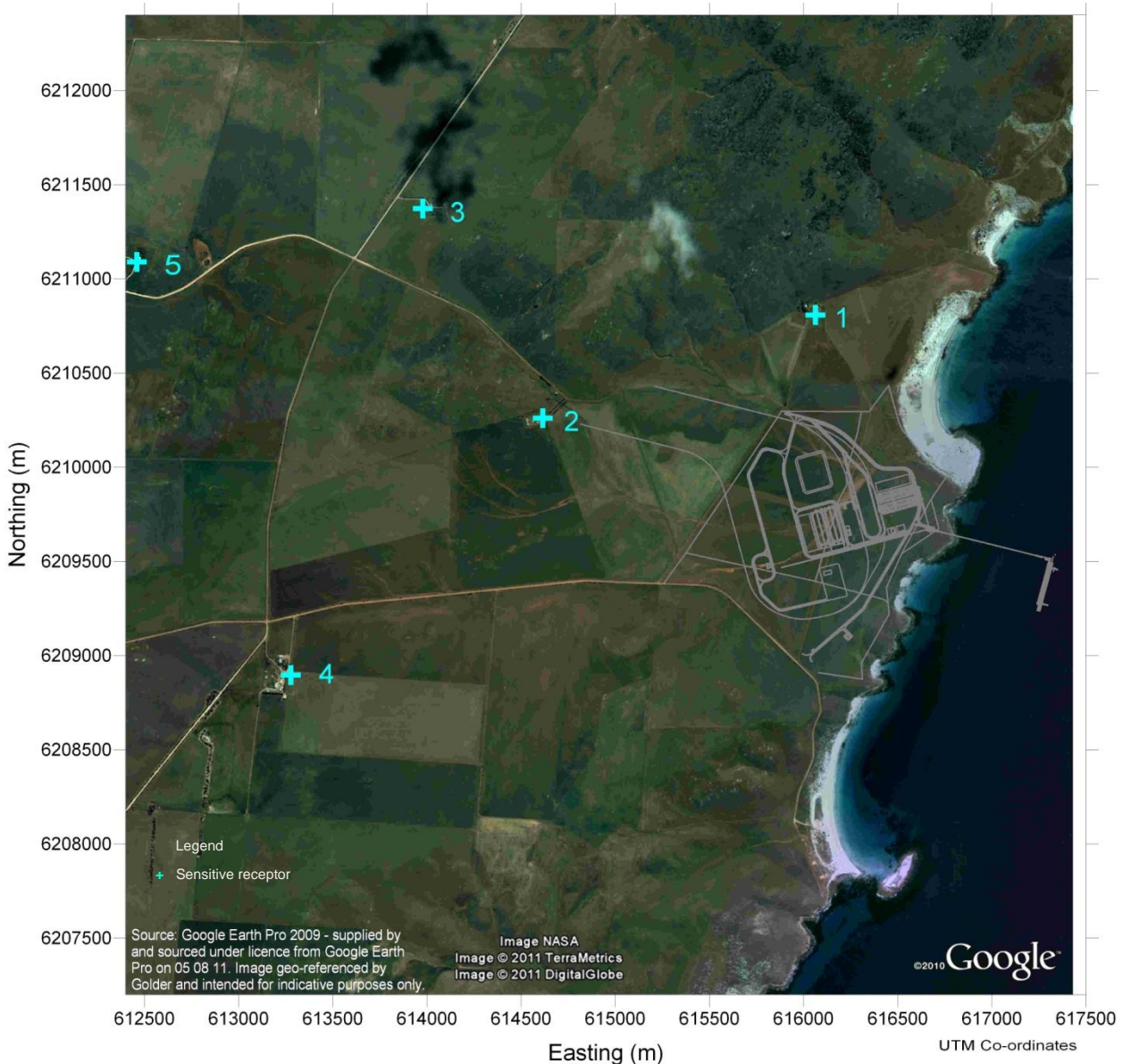


Figure 4: Site and Nearest Sensitive Receptors



As a consequence of the lack of site specific meteorological data, a state-of-the-art prognostic multi-layered three dimensional (3D) model, The Air Pollution Model (TAPM) was used to simulate the meteorological processes and the recorded data, with the Cleve AWS used to validate the model to ensure its adequate configuration. This model was used to produce hourly site-representative winds and micrometeorological information that (in conjunction with an emissions inventory from the site) was then used with the AUSPLUME plume dispersion model to assess the impacts of the various emissions to air on surrounding land uses. The use of these models is described in the following sections.

4.2 Prognostic Meteorological Model

TAPM Version 4 was developed at CSIRO Marine and Atmospheric Research and is a PC-based prognostic modelling system that can predict regional scale 3D-meteorology. It is suitable for use with complex geography and/or where the available site-representative meteorology is inadequate, which is the case for the far-field data recorded at the Cleve, Cummins and Port Lincoln sites. The model accesses databases of BoM synoptic weather analysis. TAPM provides the link between the synoptic large-scale flows, which in this case includes such phenomena as the roaring forties, and the local climatology.

4.2.1 Model Configuration

TAPM was initially configured with a nested model grid coverage designed to capture the following:

- Broad scale synoptic flows
- Regional and broader scale sea breezes and land breezes
- Regional and broader wind channelling around terrain features
- Influence of land use.

The nested grids were then configured with the surface characteristics, such as terrain elevation, surface roughness/vegetation type, soil type and monthly varying (initial) deep soil moisture content.

The terrain elevation data, at a 9-second (300 m) resolution, was obtained from Geoscience Australia.

The characterised vegetation and land use was determined from the use of aerial photographs. Soil type information was derived from a geological map of the region, in conjunction with the coarser default US Geological Dataset provided with the model.

The synoptic data available for use within the model was for the year 2008.

After the model was run, hourly varying surface winds, temperatures and measures of atmospheric stability were extracted at the location of the Cleve AWS site for validation purposes. Data was also extracted from the surface location centred over the project site for use as input into the AUSPLUME dispersion model, as described below.

Specific model settings were as follows:

- 4 nested grids at 700 m, 2,100 m, 6,300 m, 18,000 m resolution; 71 x 71 grid points
- 25 vertical levels, ranging up to 8,000 m
- Grids centred at the proposed site at a local grid centre of 615922E 6210198S (MGA 94)
- Topography generated from AUSLIG 9-second (250 m resolution) terrain elevation datasets provided with the model



- Characterised vegetation and land use was initially determined from the datasets provided with the model, but then manually adjusted to reflect greater accuracy with reference to aerial imagery
- Default deep soil volumetric moisture content and air-sea temperature differences
- Surface vegetation and precipitation processes included (snow processes and non-hydrostatic processes were excluded)
- Assimilation of recorded data from the Cummins and Port Lincoln AWS into the model setup

4.2.2 Validation

The distribution of wind speeds and directions as predicted by TAPM can be validated against a local observed source of meteorology if available. In this regard, the observed winds at the Cleve AWS meteorological site were available for validation (638996E, 6268987S (MGA94)).

The observed data for the Cleve AWS is presented in Figure 5 and the predicted data from the TAPM simulated meteorological file in Figure 6. Each are presented as annual and seasonal wind roses.

Comparisons of the annual wind roses shown in the figures indicate that the TAPM predictions generally represent the observed meteorology, with the following meteorological phenomena reproduced by the model:

- South-west and north-east sector winds are the least likely to occur.
- A high incidence of winds from the northerly direction.
- Wind speeds are in the mid to high range with an annual average wind speed of 4.06 m/s. Spring (4.41 m/s) and winter (4.39 m/s) are the windiest seasons and autumn (3.60 m/s) the calmest.
- Summer shows an increased frequency of south-east winds, noting the transition of the seasons.

TAPM however, predicts a lower annual average wind speed (4.06 m/s) than the observed data (5.56 m/s). This is mostly due to calmer winds during the summer and autumn months, and TAPM greatly under predicts higher wind speeds (over 8 m/s). This will lead to an over-estimation of the predicted pollutant concentrations as dilution is directly linked to wind speed. This can be accepted as the modelling outcomes will be deemed more conservative.

A comparison of the TAPM predicted wind roses with the wind roses produced from the four months of data collected at the Port site is presented in Figure 7. The wind roses show that the model represents the observed wind directions well, although wind speed is generally under predicted.



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

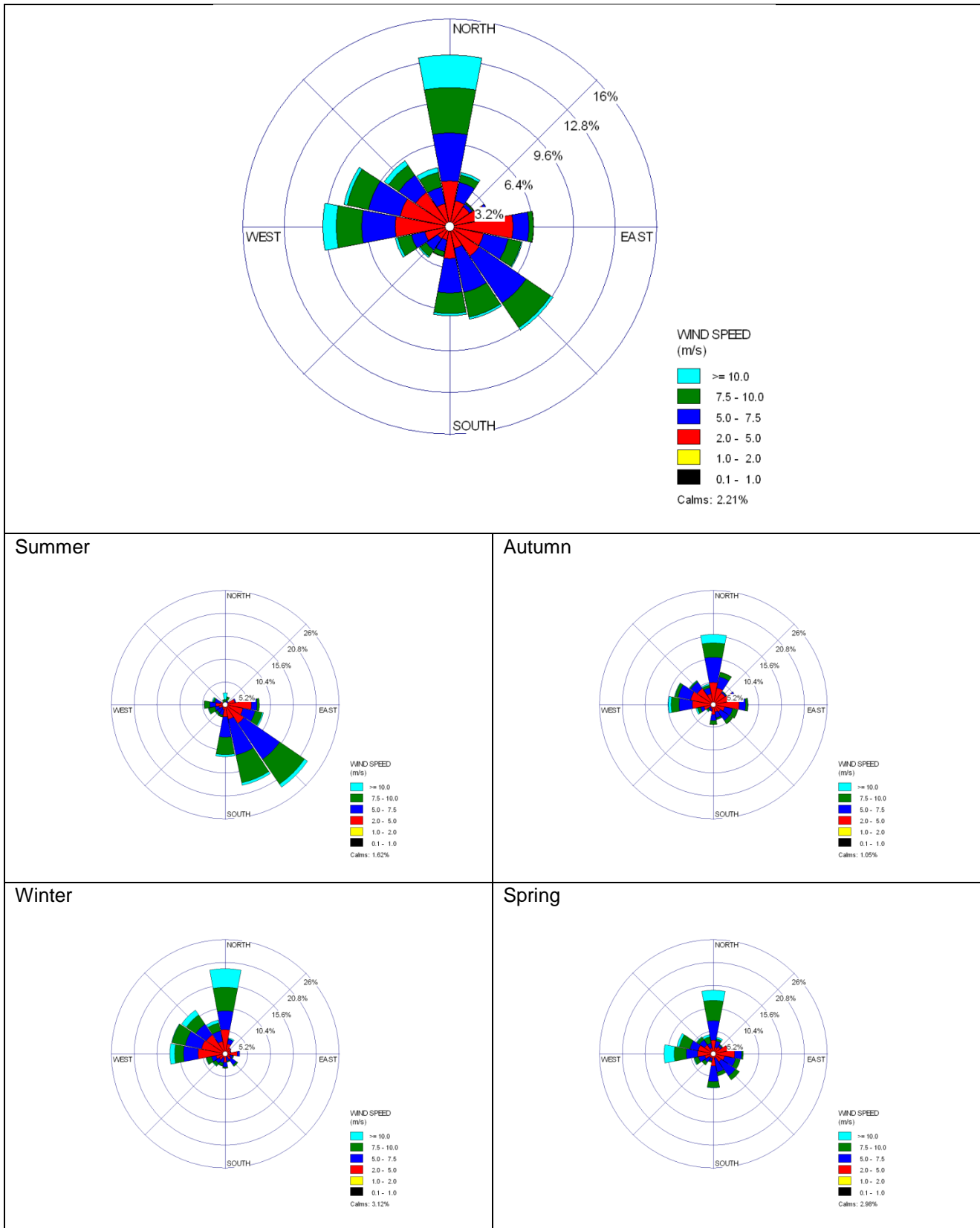


Figure 5: Annual and Seasonal Wind Roses for Observed Meteorological Data Cleve Automatic Weather Station 2008



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

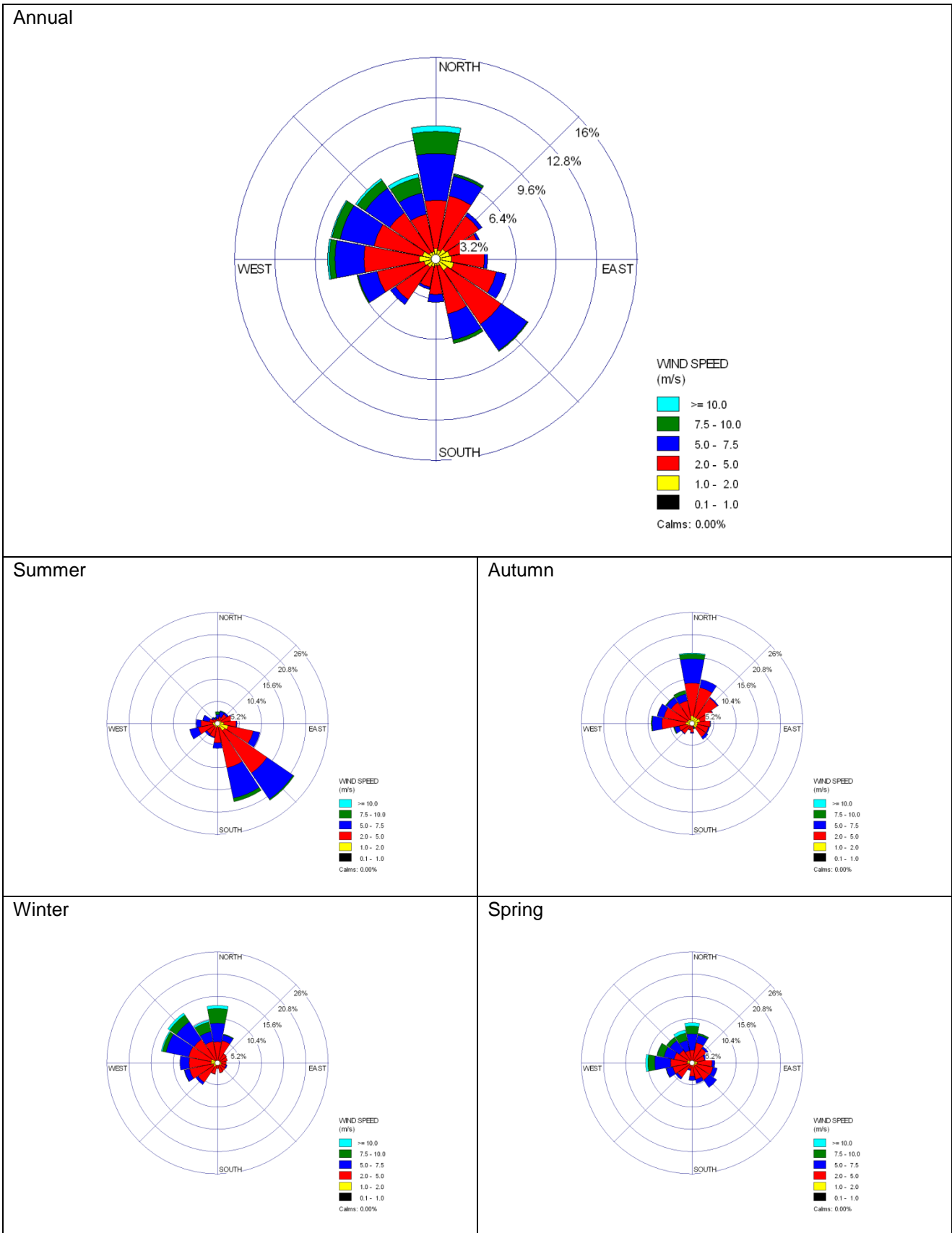
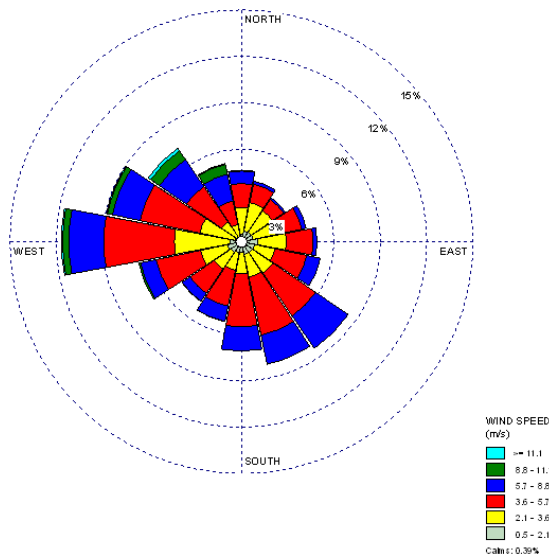


Figure 6: Annual and Seasonal Wind Roses for The Air Pollution Model (Version 4) Synthesised Meteorological Data at Cleve 2008

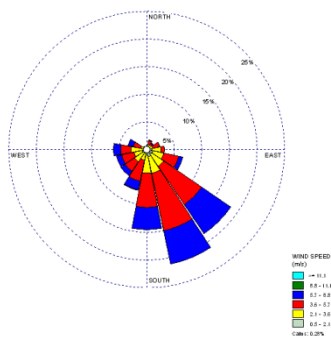


CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

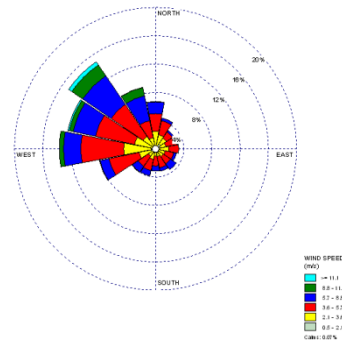
Annual - TAPM Port Spencer 2008



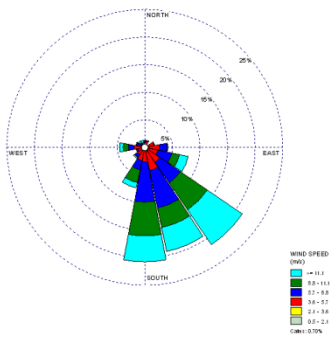
Summer – TAPM Port Spencer 2008



Winter – TAPM Port Spencer 2008



Summer – Observed Port Spencer 2011



Winter – Observed Port Spencer 2010

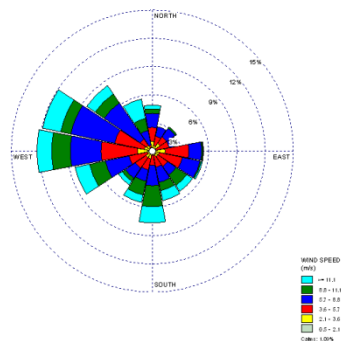


Figure 7: Annual and Seasonal Wind Roses for The Air Pollution Model (Version 4) Synthesised Meteorological Data Vs Observed Meteorological Data at Port Spencer



5.0 EMISSIONS TO AIR

The main air quality impact associated with the Stage 1 Port operation is particulate matter emissions associated with the transport and handling of grain and ore.

There will be a 5 MW diesel fuelled generator on the site to provide electricity for the site until a mains connection is secured (expected to be during Stage 2 of the Port’s development). The generator stack will emit combustion products, of which the potential contaminants of concern are typically considered to be oxides of sulphur and nitrogen (SO_x and NO_x) and carbon monoxide (CO). Based on our experience of these types of emission sources and our knowledge of the environmental setting of the site, we consider it is not necessary to complete a fully quantitative risk assessment of this emission using a model for the following reasons:

- The generator will only be operating at peak load periodically when the conveyors are operational during ship loading (for approximately two days every two weeks) and at all other times will be operational to provide a much lower base load. The generator will therefore generally not be subject to frequent cold starts, which would normally be expected to contribute a short term increase in emission concentration.
- Given the rural setting of the site, the background concentrations of SO_x, NO_x and CO are likely to be negligible.
- The closest receptor is 1 km from the site (see Table 1). In our experience, the emissions from diesel fuelled generators rarely exceed air quality assessment criteria at this distance in areas with low background.

Airborne particulate matter is defined as total suspended particulate (TSP) or classified based on particle size. PM₁₀ represents particles with an equivalent aerodynamic diameter less than 10 micrometres and PM_{2.5} represents particles with an equivalent aerodynamic diameter less than 2.5 micrometres. The risks to human health from inhalation of PM₁₀ and PM_{2.5} have been well demonstrated, with particles in these size fractions able to pass through the nose and throat and deposit in the lower regions of the respiratory tract. TSP impacts are generally associated with nuisance, with large particles rapidly settling from air causing amenity issues. The modelling assessment has considered PM₁₀ and PM_{2.5} only.

Particulate matter emissions sources identified for the processes associated with receiving, storing and shipping materials are summarised in Table 2. Emission rates for each of the identified sources have been calculated using the Emission Estimation Technique Manual for Mining published by the Department of Sustainability, Environment, Water, Population and Communities [1] and emission factor documents (AP42) published by the United States Environmental Protection Agency (USEPA), [2, 3]. Calculation details and assumptions are presented in Appendix A.

Table 2: Emission Sources

Emission Source	Hematite	Grain
In-loading	40 t payload	11.6 t payload
In-loading ventilation	Fabric filter	Fabric filter
Shed ventilation	Fabric filter	NA
Out-loading conveyor transfer point 1	Out-loading from shed	Out-loading from shed
Out-loading conveyor transfer point 2	Land to wharf	Land to wharf
Out-loading conveyor transfer point 3	Wharf to wharf	Wharf to wharf
Out-loading conveyor transfer point 4	Wharf to ship	Wharf to ship
Out-loading ship loading	Ship loaded over 24 hour period	Ship loaded over 24 hour period



The main sources of particulate matter emissions to air have been identified as follows:

- 5MW diesel fuelled generator
- Hematite storage shed
- Hematite receival hopper
- Hematite out-loading conveyors
- Hematite ship loader
- Grain storage shed
- Grain receival hopper
- Grain out-loading conveyors
- Grain ship loader.

Road train access is via sealed road, therefore dust emissions associated with moving vehicles is considered negligible.

The characteristics for each of the sources identified are presented in the following sections:

Material Receiving

Trucks will unload within a covered gantry (two sides and a roof), tipping payload into a hopper through Burnley Baffles. The hopper head space, elevator and conveyor will be ventilated through a reverse air fabric filter before being discharged. Dust not controlled by the baffles and ventilation will be treated as a fugitive source from the gantry structure. Based on information supplied by Mideco Dust Control Pty Ltd, the use of the dust ventilation units is conservatively estimated, as representing 70% emission control. It is assumed that material will be received at the site between 06:00 h and 22:00 h.

Storage

The hematite shed will be serviced by a ventilation system and reverse air fabric filters, 24 hours a day. Based on supplier information, it is conservatively assumed that concentration of particulate matter passing the filter is 10 mg/Nm^3 for both PM_{10} and $\text{PM}_{2.5}$. Based on best engineering practice, it is also assumed that the fabric filter exhaust will discharge 3 m above the roof line with a vertical exit velocity of 16 m/s.

Conveyor Transfer

Conveyors will be serviced by ventilation systems with pulsed jet fabric filters at each of the conveyor transfer points. It is conservatively assumed that the concentration of particulate matter passing the filters is 10 mg/m^3 for both PM_{10} and $\text{PM}_{2.5}$.

Ship Loading

Dust generation during ship loading will be controlled by utilising fully enclosed boom conveyors and a chute into the hold of the ship. Water spray facilities will also be available if required, although this is not expected to be necessary as the hematite ore comes from the mine wet. It is also assumed that ship loading will occur over a continuous 24 hour period.



5.1 Worst Case Dust Generation

Unloading

It is assumed that a single payload of material will be unloaded over a period of 10 minutes giving an unload rate (tonnes/h) equal to six times the average payload that will occur over the period 06:00 – 22:00 h. Six deliveries are unlikely to occur in one hour and therefore the actual unload rate will be much less.

It has also been conservatively assumed that unloading of hematite and grain will occur simultaneously.

Ship Loading

Port practice will allow loading of one ship at a time, however, it has been conservatively assumed that out-loading of hematite and grain to ship's holds will occur simultaneously. In addition, emission factors used for ship loading are based on having no dust control measures in place, another conservative assumption.

5.2 Assessment Criteria

South Australian EPA guidelines “Air quality impact assessment using design ground level pollutant concentrations (DGLCs)” [8] state that the DGLC must be met at all times; no ground level concentrations calculated through pollutant dispersion modelling can exceed the DGLC. That is, the 100th percentile of results should be equal to or less than the DGLC. PM₁₀ and PM_{2.5} DGLCs are not listed within the guidelines. In their absence, it is appropriate to compare proposed emissions to air with national criteria.

Ambient air quality criteria have been developed by the Environment Protection and Heritage Council (EPHC), which incorporates the National Environment Protection Council (NEPC). NEPC is a statutory body established by the *National Environment Protection Council Act (1994) (Commonwealth)* with the purpose of creating and assessing the effectiveness of National Environment Protection Measures (NEPMs).

The Ambient Air Quality NEPM (AAQ NEPM) was instigated in 1998 and contains standards and goals for ambient air pollutants [4]. PM₁₀ has been included since inception, whilst PM_{2.5} was added as an advisory reporting standard in 2003 [5]. The entire AAQ NEPM is currently under review. Schedule 2 standards and goals stipulated by the AAQ NEPM for PM₁₀ and PM_{2.5} are presented in Table 3. The maximum concentrations are applicable to sensitive receptors.

Table 3: AAQ NEPM Schedule 2 Standards and Goals

Pollutant	Averaging Period	Maximum Concentration (µg/m ³)	Goal within 10 years maximum allowable exceedences
PM ₁₀	24 hours	50	5 days per year
PM _{2.5}	24 hours	25	Advisory reporting standard
	1 year	8	



6.0 DISPERSION MODELLING

Air quality impacts of the project were assessed using the AUSPLUME Version 6.0 air dispersion model [9]. The meteorological component of the model was created using TAPM [10].

Further details on both components; meteorology and air dispersion, are presented in the following sections.

6.1 Atmospheric Dispersion Model – AUSPLUME

The potential air quality effects resulting from particulate matter discharges to air at the site have been assessed using a standard atmospheric dispersion modelling approach. AUSPLUME is a steady-state Gaussian dispersion model, which is considered appropriate for this assessment given the relatively flat terrain of the receiving environment, the small scale of the operation and the existing air quality.

For the purpose of modelling ground level concentration (GLC), the site and surrounding area were represented by a square grid comprised of 101 x 101 grid points representing an area of 25 km². Terrain height data at each of the grid points was incorporated into the model.

6.2 Meteorology

Due to the absence of continuous upper air meteorological observations for input into AUSPLUME, the CSIRO meteorological and prognostic air pollution model, TAPM, was used to create the required data. The meteorological component of TAPM is an incompressible, optionally non-hydrostatic, primitive equation model with a terrain-following vertical co-ordinate for three dimensional simulations. The model is connected to “databases of terrain, vegetation and soil type, leaf area index, sea-surface temperature and synoptic – scale meteorological analysis for various regions around the world” [11]. These inputs were used together with observations from nearby meteorological stations to create a synthetic meteorological file for the period 1 January 2008 to 31 December 2008 for input into AUSPLUME.

6.3 Discharge Parameters

6.3.1 Point Sources

Point sources are listed below:

- In-loading ventilation stacks
- Hematite shed ventilation stack
- Conveyor transfer point ventilation stacks
- Generator exhaust stacks.

Model input data for point sources is presented in Table 4.



Table 4: Model Input Data: Point Sources

Model Source ID	Description	PM ₁₀ Emission Rate*	PM _{2.5} Emission Rate*	Units	Emission Type
Hema-r	Hematite receiving hopper ventilation exhaust	0.50	0.50	kg/h	06:00h – 22:00h
Hema-s	Hematite shed ventilation exhaust	1.3	1.3	kg/h	06:00h – 22:00h
TP-H1	Hematite conveyor transfer point 1 exhaust	0.040	0.040	kg/h	Constant
TP-H2	Hematite conveyor transfer point 2 exhaust	0.040	0.040	kg/h	Constant
TP-H3	Hematite conveyor transfer point 3 exhaust	0.040	0.040	kg/h	Constant
TP-H4	Hematite conveyor transfer point 4 exhaust	0.040	0.040	kg/h	Constant
Grai-r	Grain receiving hopper ventilation (including shed ventilation) exhaust	0.56	0.56	kg/h	06:00h – 22:00h
TP-G1	Grain conveyor transfer point 1 exhaust	0.040	0.040	kg/h	Constant
TP-G2	Grain conveyor transfer point 2 exhaust	0.040	0.040	kg/h	Constant
TP-G3	Grain conveyor transfer point 3 exhaust	0.040	0.040	kg/h	Constant
TP-G4	Grain conveyor transfer point 4 exhaust	0.040	0.040	kg/h	Constant
Gentr	Generator (electricity) exhaust	0.44	0.22	kg/h	Constant

Note: * Emission rate calculations defined in Appendix A

6.3.2 Volume Sources

Volume sources are bulky diffuse sources that emit or release pollutants over large areas in three dimensions. Volume sources identified at the site include the following:

- Unloading gantries
- Ship’s hold during loading.

Model input data for volume sources is presented in Table 5.

Table 5: Model Input Data: Volume Sources

Model Source ID	Description	PM ₁₀ Emission Rate*	PM _{2.5} Emission Rate*	Units	Emission Type
HemaRV	Hematite unloading gantry	0.31	0.031	kg/h	06:00h – 22:00h
GrainRV	Grain unloading gantry	2.7	0.45	kg/h	06:00h – 22:00h
HemaShp	Hematite ship’s hold during loading	0.2	0.020	kg/h	Constant
GraiShp	Grain ship’s hold during loading	1.2	0.22	kg/h	Constant

Note: * Emission rate calculations defined in Appendix A

6.4 Overview

An overview of the point and volume sources is presented Figure 8.

Effective release height and initial vertical and horizontal spreads were calculated from the dimensions and application of the proposed equipment. Where equipment details are yet to be determined, dimensions were obtained from representative equipment for each of the machinery types.

Calculation details and assumptions are given in Appendix A.



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

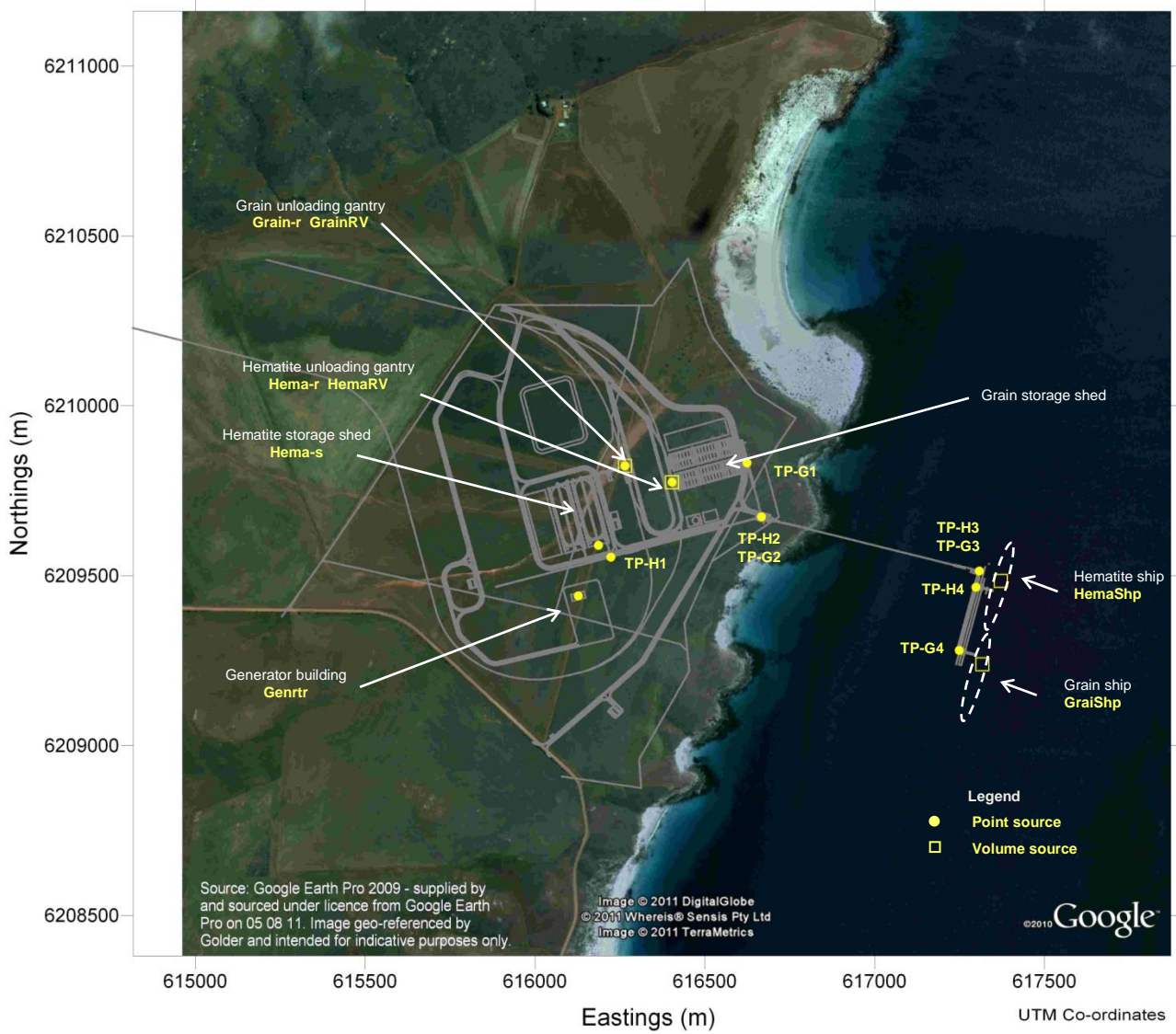


Figure 8: Site Lay-out and Emission Sources



7.0 RESULTS

Model isopleth plots representing the 24 hour average worst case PM₁₀ and PM_{2.5} GLCs over the extent of the receptor grid are presented in Figure 9 and Figure 10 respectively. The annual average worst case PM_{2.5} GLCs are presented in Figure 11. The isopleth plots represent concentrations predicted from site activities only and do not include background concentrations.

The maximum predicted GLCs for hematite handling, grain handling and combined hematite and grain handling at the sensitive receptors are presented in Table 6. Table 7 presents the maximum predicted incremental GLCs at each of the sensitive receptors during worst case hematite and grain handling.

The complete model output file is contained in Appendix B.

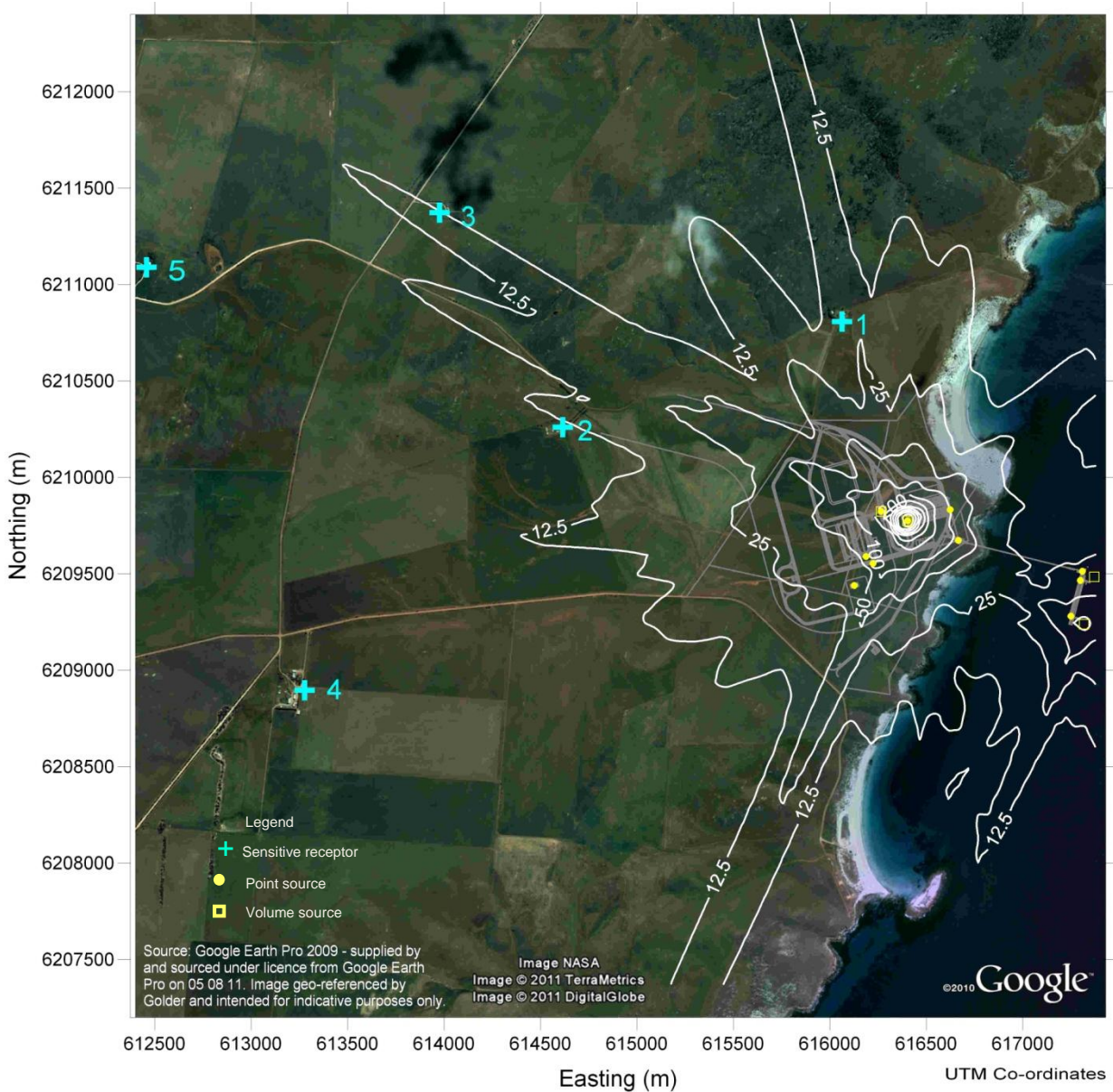


Figure 9: Maximum Predicted PM₁₀ GLC (µg/m³ 24 hour average)



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

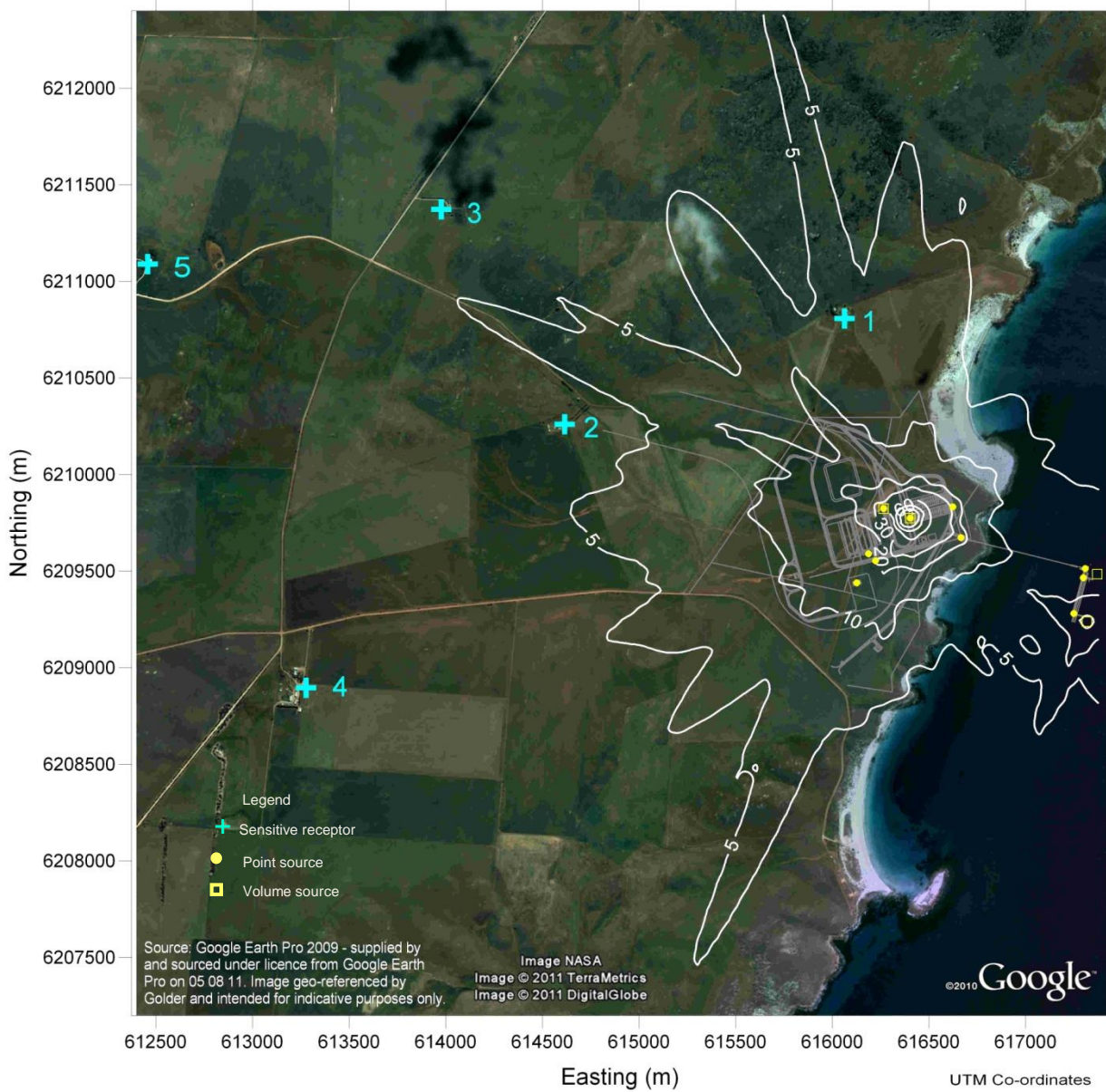


Figure 10: Maximum Predicted PM_{2.5} GLC (µg/m³ 24 hour average)



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

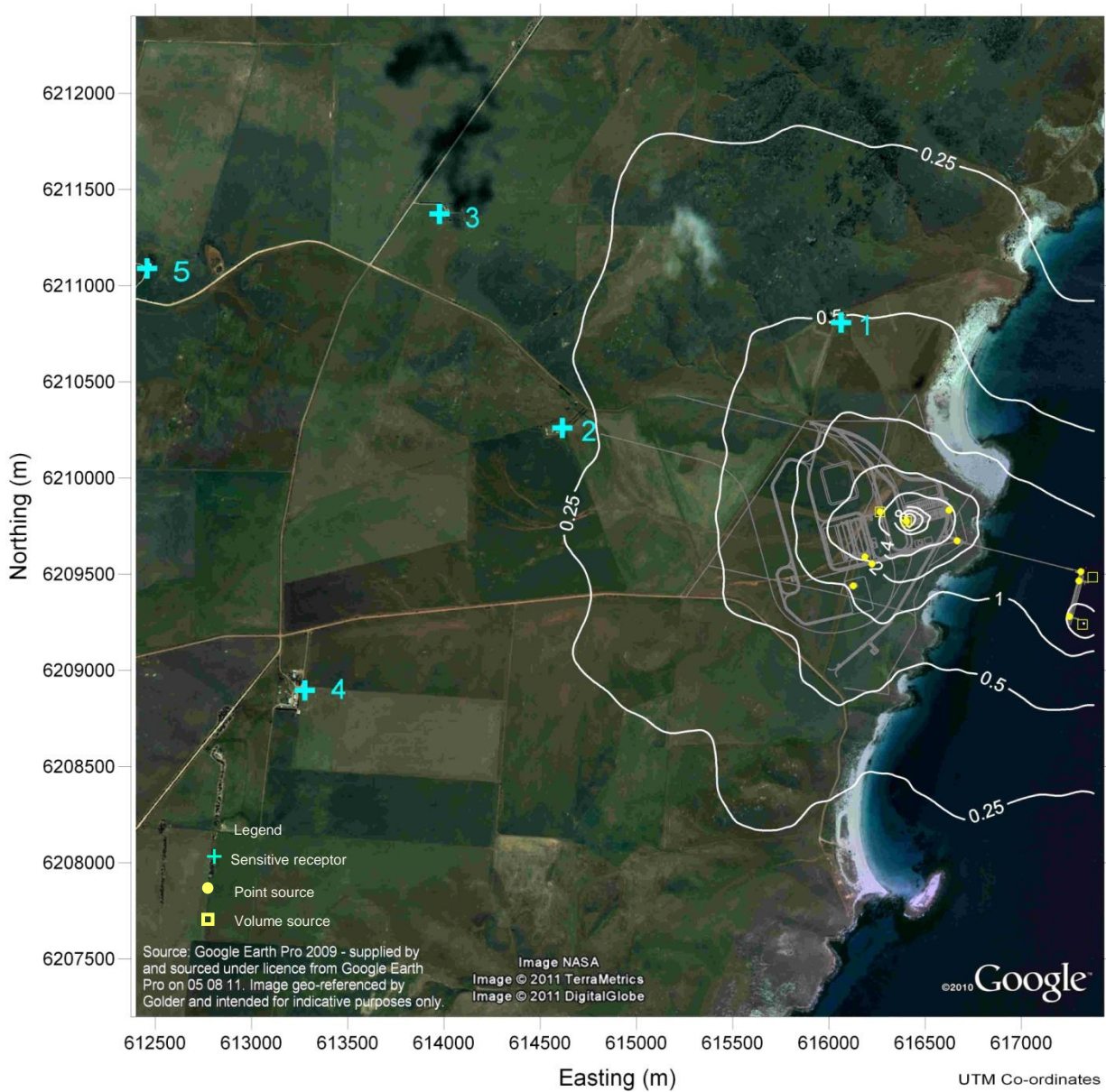


Figure 11: Maximum Predicted PM_{2.5} GLC (µg/m³ annual average)



CENTREX PORT SPENCER: AIR QUALITY IMPACT ASSESSMENT

Table 6: Maximum Predicted Ground Level Concentrations – All Sensitive Receptors

Atmospheric Contaminant	Averaging Period	Maximum Predicted GLC ($\mu\text{g}/\text{m}^3$)			Background GLC ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$)			Location ⁽⁵⁾ of GLC (m)	DGLC
		Hematite	Grain	Hematite and Grain		Hematite	Grain	Hematite and Grain		
PM ₁₀	24 hours	4.5	14	19	14 ⁽¹⁾	19	28	33	616063, 6210808	50
PM _{2.5}	24 hours	2.9	4.4	7.3	7 ⁽²⁾	10	11	14	616063, 6210808	25
	1 year	0.27	0.25	0.51	7 ⁽³⁾	7.3	7.2	7.5	616063, 6210808	8

Note:

⁽¹⁾ 70th percentile of 24 hour average PM₁₀ data

⁽²⁾ 50% of background PM₁₀

⁽³⁾ 50% of PM₁₀ annual average

⁽⁵⁾ UTM co-ordinates

GLC Ground Level Concentration

DGLC Design Ground Level Concentration

Table 7: Maximum Predicted Incremental Ground Level Concentrations - Individual Sensitive Receptors (Hematite and Grain)

Sensitive Receptor	Location ⁽¹⁾ (m)	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} 24hr ($\mu\text{g}/\text{m}^3$)	PM _{2.5} annual ($\mu\text{g}/\text{m}^3$)
1	616063, 6210808	19	7.3	0.51
2	614615, 6210260	11	3.7	0.22
3	613977, 6211372	13	3.7	0.16
4	613277, 6208896	4.7	2.3	0.12
5	612459, 6211089	7.2	2.2	0.082

Note:

⁽¹⁾ UTM co-ordinates



8.0 DISCUSSION

The modelling assessment concludes that the maximum predicted 24 hour average PM₁₀ and PM_{2.5} concentrations resulting from Stage 1 of the Port comply with the model assessment criteria at the nearest sensitive receptors.

The modelling assessment also concludes that the maximum predicted annual average PM_{2.5} concentration resulting from Stage 1 of the Port complied with the model assessment criteria at the nearest sensitive receptors. The predicted cumulative annual average represents approximately 88% of the assessment criteria, however the maximum predicted concentration due to Port activities only represents 6.8% of the cumulative PM_{2.5} concentration.

In addition, it should be noted that the assessment included a number of worst case elements:

- the background PM₁₀ concentration was derived from the Wilgerup mine site
- the background PM_{2.5} concentration was conservatively derived from the background PM₁₀ concentration
- grain and hematite unloading was conservatively assumed to occur simultaneously
- grain and hematite ship loading was conservatively assumed to occur simultaneously
- ship loading was conservatively assumed to have no dust control measures in place.



9.0 LIMITATIONS

Your attention is drawn to the document – “Limitations”, which is included as Appendix C to this report. The statements presented in this document are intended to advise you of what your realistic expectations of this report should be. The document is not intended to reduce the responsibility accepted by Golder Associates, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.



10.0 ABBREVIATIONS

AHD	Australian height datum
AAQMS	Ambient air quality monitoring station
AAQ NEPM	National Environment Protection (Ambient Air Quality) Measure
EPHC	Environment Protection and Heritage Council
GLCs	Ground level concentrations
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
PM ₁₀	Particulate matter with an equivalent aerodynamic diameter less than 10 microns
PM _{2.5}	Particulate matter with an equivalent aerodynamic diameter less than 2.5 microns
TAPM	The Air Pollution Model
USEPA	United States Environmental Protection Agency



11.0 REFERENCES

- 1 Department of Sustainability, Environment, Water, Population and Communities, “*Emission Estimation Technique Manual for Mining (Version 3.0)*”, 2011
- 2 United States Environmental Protection Agency, “*AP-42, Compilation of Air Pollutant Emission Factors. Chapter 11.24: Metallic Mineral Processing*”, Fifth Edition, January 1995
- 3 United States Environmental Protection Agency, “*AP-42, Compilation of Air Pollutant Emission Factors. Chapter 9.9: Grain Processing*”, Fifth Edition, January 1995
- 4 National Environment Protection Council Service Corporation, “*National Environment Protection (Ambient Air Quality) Measure – Revised Impact Statement*”, June 1998
- 5 Environment Protection and Heritage Council, “*National Environment Protection (Ambient Air Quality) Measure (as amended)*”, August 2003
- 6 Bureau of Meteorology, North Shields (Port Lincoln AWS) {station 018192}
- 7 Victorian Government Gazette S240, “*State Environment Protection Policy (Air Quality Management)*”, December 2001
- 8 Environment Protection Authority South Australia guidelines (updated January 2006), EPA 386/06, “*Air Quality Impact Assessment Using Design Ground Level Pollutant Concentrations (DGLCs)*”
- 9 EPA Victoria, “*AUSPLUME Version 6.0*”, April 2004
- 10 CSIRO Marine and Atmospheric Research “*TAPM Version 4*”, 2008
- 11 Hurley, Peter. “*TAPM V4 User Manual*” CSIRO, Melbourne, 2008



Report Signature Page

GOLDER ASSOCIATES PTY LTD

Handwritten signature of Mark Tulau in black ink.

Mark Tulau
Senior Air Quality Specialist

Handwritten signature of Frank Fleer in black ink.

Frank Fleer
Principal

MDT/FF/kp

A.B.N. 64 006 107 857

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

\\ade1-s-file01\jobs\mining\2010\107661001 - centrex - port eia approvals - lipson\correspondence out\107661001-071-r-air modelling\rev0\107661001-071-r-rev0-centrex.docx



APPENDIX A

Emission Rates



1.0 EMISSION RATE CALCULATIONS

Emission factors relate the quantity of a substance emitted from a source to a measure of activity associated with the source. Common measures of activity include distance travelled, quantity of material handled or the duration of the activity.

1.1 Volume Sources

1.1.1 Hematite

The Department of Sustainability, Environment, Water, Population and Communities Emission Estimation Technique (EET) Manual for Mining¹ utilises emission factors to estimate emissions to the environment from various sources.

General assumptions made in the calculation of emission rates are as follows:

- Excavated material will have a moisture content of 2%²
- The average wind speed (as determined by TAPM meteorological model) is 4.06 m/s³
- PM_{2.5} emissions, where not specified, comprise 10% of PM₁₀ emissions

Truck Unloading

The EET emission factor for trucks dumping overburden is used for the unloading of hematite. The EET suggests that the PM₁₀ emission factor is equal to 35.5% of the value for the TSP emission factor:

$$EF_{PM10} = 0.012 \text{ kg/t} \times 0.355 = 0.0043 \text{ kg/t}$$

Burnley baffle control is assumed to reduce this emission factor by 70%.

Ship Loading

The EET provides an emission factor equation for a continuous loading operation:

$$EF_{PM10} = 0.35 \times 0.0016 \times \frac{(U/2.2)^{1.3}}{(M/2)^{1.4}}$$

where

U: mean wind speed (m/s)

M: moisture content of material (%)

1.1.2 Grain

Chapter 9 of the USEPA AP42 document discusses emissions associated with food and agricultural activities⁴ and provides the following emission factors.

(Straight) Truck Unloading

$$EF_{PM10} = 0.128 \text{ kg/t}$$

$$EF_{PM2.5} = 0.022 \text{ kg/t}$$

Burnley baffle control is again assumed to reduce these emission factors by 70%.

¹ National Pollutant Inventory "Emission Estimation Technique Manual for Mining" Version 3.0

² National Pollutant Inventory "Emission Estimation Technique Manual for Mining" Version 3.0, default value for moisture content

³ TAPM predicted annual average (Appendix C)

⁴ USEPA AP 42 Chapter 9.9.1: Food and Agricultural Industries – Grain Processing, Grain Elevators And Processes



Ship Loading

$$EF_{PM10} = 0.026 \text{ kg/t}$$

$$EF_{PM2.5} = 0.005 \text{ kg/t}$$

1.2 Point Sources

Exhaust stacks servicing ventilation of truck unloading hoppers, conveyor transfer and the hematite storage shed will utilise fabric filters. The assumed particulate matter concentration for these point sources is 10 mg/m^3 for both PM_{10} and $PM_{2.5}$.

Ventilation system assumptions are as follows:

- Hematite in-loading: $14 \text{ m}^3/\text{s}$
- Hematite shed: $35 \text{ m}^3/\text{s}$
- Grain in-loading: $15.5 \text{ m}^3/\text{s}$
- Conveyor transfer points: $1.1 \text{ m}^3/\text{s}$

Emission factors for the diesel generator are sourced from the USEPA AP42 Stationary Internal Combustion Sources document⁵:

$$EF_{PM10} = 0.44 \text{ kg/h}$$

$$EF_{PM2.5} = 0.22 \text{ kg/h}$$

based on a 5 MW electrical generator.

\\ade1-s-file01\jobs\mining\2010\107661001 - centrex - port eia approvals - lipson\correspondence out\107661001-071-r-air modelling\rev0\107661001-071-r-rev0-appendix.docx

⁵ USEPA AP 42 Chapter 3.4: Stationary Internal Combustion Sources - Large Stationary Diesel and All Stationary Dual-fuel Engines



APPENDIX B

Dispersion Modelling



1.0 INTRODUCTION

This Appendix contains AUSPLUME input details and output data for the PM₁₀ and PM_{2.5} model runs. AUSPLUME Version 6.0 was used in this assessment.

1.1 PM₁₀

1.1.1 Gridded Receptors

1

Port Spencer - PM10

Concentration or deposition	Concentration
Emission rate units	kg/hour
Concentration units	microgram/m3
Units conversion factor	2.78E+05
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m
Use the convective PDF algorithm?	No
Averaging time for sigma-theta values	60 min.

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Sigma-theta
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.100m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients given by the hourly met. file, a value from the following table (in K/m) is used:

Wind Speed Category	Stability Class					
	A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES

Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES

24 hours



APPENDIX B Dispersion Modelling

Port Spencer - PM10

SOURCE GROUPS

Group No. Members

1	HEMA-R HEMA-S GENRTR TP-H1 TP-H2 TP-H3 TP-H4 HEMARV HEMSHP
2	GRAI-R GENRTR TP-G1 TP-G2 TP-G3 TP-G4 GRAIRV GRASHP
3	HEMA-R HEMA-S GRAI-R GENRTR TP-H1 TP-H2 TP-H3 TP-H4 TP-G1 TP-G2 TP-G3 TP-G4 HEMARV GRAIRV HEMSHP GRASHP

1

Port Spencer - PM10

SOURCE CHARACTERISTICS

STACK SOURCE: HEMA-R

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616265 6209823 9m 0m 1.06m 25C 16.0m/s

Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	5.04E-01	8	5.04E-01
9	5.04E-01	10	5.04E-01	11	5.04E-01	12	5.04E-01
13	5.04E-01	14	5.04E-01	15	5.04E-01	16	5.04E-01
17	5.04E-01	18	5.04E-01	19	5.04E-01	20	5.04E-01
21	5.04E-01	22	5.04E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

STACK SOURCE: HEMA-S

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616187 6209589 13m 23m 1.67m 25C 16.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	140	164	184	198	205	207	203	202	206	205	196	183
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	205	197	182	163	139	110	78	79	111	140	164	184
Along-flow distance from stack	-10	-15	-19	-23	-25	-28	-29	-47	-80	-111	-139	-162
Across-flow distance from stack	41	56	70	82	91	97	100	101	98	92	84	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	140	164	184	198	205	207
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	198	206	207	203	202	206	205	196	182	163	139	110
Along-flow distance from stack	-180	-193	-200	-202	-202	-201	-195	-182	-164	-141	-113	-83
Across-flow distance from stack	59	44	28	10	-7	-25	-41	-56	-70	-81	-91	-97

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	203	202	206	204	197	183	163	139	110	78	79	111
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	78	79	111	140	164	184	198	206	208	203	202	206
Along-flow distance from stack	-49	-32	-31	-29	-26	-22	-17	-13	-7	-1	0	-5
Across-flow distance from stack	-100	-101	-98	-92	-84	-72	-59	-44	-27	-10	7	25

(Constant) emission rate = 1.26E+00 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: GRAI-R

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616403 6209775 14m 0m 1.11m 25C 16.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	188	179	165	146	122	95	64	67	97	125	148	167
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	125	148	167	181	190	192	189	188	191	188	179	165
Along-flow distance from stack	-22	-17	-12	-7	-1	5	10	12	8	4	0	-5
Across-flow distance from stack	-98	-89	-78	-64	-49	-32	-14	5	24	41	58	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	181	190	192	0	0	0	188	179	165	146	122	95
Effective building height	14	14	14	0	0	0	14	14	14	14	14	14
Along-flow building length	146	122	95	0	0	0	125	148	167	181	190	192
Along-flow distance from stack	-9	-13	-16	0	0	0	-104	-132	-156	-175	-189	-197
Across-flow distance from stack	84	94	101	0	0	0	98	89	78	64	49	31

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	65	67	97	125	148	167	181	190	192	0	0	0
Effective building height	14	14	14	14	14	14	14	14	14	0	0	0
Along-flow building length	189	188	191	188	179	165	146	122	95	0	0	0
Along-flow distance from stack	-200	-200	-199	-192	-179	-160	-137	-110	-79	0	0	0
Across-flow distance from stack	13	-6	-24	-41	-57	-72	-85	-94	-101	0	0	0

Emission rates by hour of day in kg/hour:

1 0.00E+00	2 0.00E+00	3 0.00E+00	4 0.00E+00
5 0.00E+00	6 0.00E+00	7 5.58E-01	8 5.58E-01
9 5.58E-01	10 5.58E-01	11 5.58E-01	12 5.58E-01
13 5.58E-01	14 5.58E-01	15 5.58E-01	16 5.58E-01
17 5.58E-01	18 5.58E-01	19 5.58E-01	20 5.58E-01
21 5.58E-01	22 5.58E-01	23 0.00E+00	24 0.00E+00

No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

STACK SOURCE: GENRTR

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616127 6209440 15m 5m 1.10m 300C 30.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.43E-01 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616223 6209554 15m 3m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	196	183
Effective building height	0	0	0	0	0	0	0	0	0	0	14	14
Along-flow building length	0	0	0	0	0	0	0	0	0	0	164	184
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	-184	-210
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	104	85

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	198	206	207	203	202	206	0	0	0	0	0	0
Along-flow distance from stack	-230	-243	-249	-247	-243	-236	0	0	0	0	0	0
Across-flow distance from stack	63	39	14	-12	-37	-61	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	197	183	0	0	0	0	0	0
Effective building height	0	0	0	0	14	14	0	0	0	0	0	0
Along-flow building length	0	0	0	0	164	184	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	20	27	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	-104	-85	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616666 6209673 14m 7m 0.36m 25C 11.1m/s



APPENDIX B Dispersion Modelling

Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Effective building dimensions (in metres)												
Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Effective building dimensions (in metres)												
Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H3

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617308 6209513 0m 5m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Effective building dimensions (in metres)												
Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Effective building dimensions (in metres)												
Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617298 6209466 0m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B Dispersion Modelling

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616624 6209832 15m 3m 0.36m 25C 11.1m/s

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	165	146	122	95	64	67	97	125	148	167
Effective building height	0	0	14	14	14	14	14	14	14	14	14	14
Along-flow building length	0	0	167	181	190	192	189	188	191	188	179	165
Along-flow distance from stack	0	0	-172	-192	-207	-215	-217	-216	-213	-204	-189	-167
Across-flow distance from stack	0	0	85	68	50	30	9	-13	-34	-54	-72	-88

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	165	146	122	95	
Effective building height	0	0	0	0	0	0	0	14	14	14	14	
Along-flow building length	0	0	0	0	0	0	0	167	181	190	192	
Along-flow distance from stack	0	0	0	0	0	0	0	5	11	17	23	
Across-flow distance from stack	0	0	0	0	0	0	0	-85	-69	-50	-30	

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	65	67	97	125	148	167	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	189	188	191	188	179	165	0	0	0	0	0	0
Along-flow distance from stack	28	27	22	16	9	3	0	0	0	0	0	0
Across-flow distance from stack	-9	13	34	53	72	88	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616666 6209673 14m 7m 0.36m 25C 11.1m/s

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B Dispersion Modelling

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G3

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
617308	6209513	0m	5m	0.36m	25C	11.1m/s

	Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0	
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0	
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0	
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0	
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0	

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G4

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
617249	6209280	0m	7m	0.36m	25C	11.1m/s

	Effective building dimensions (in metres)												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0	
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0	
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0	
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0	
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0	

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

VOLUME SOURCE: HEMARV

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
616265	6209823	9m	5m	1m	3m

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	3.10E-01	8	3.10E-01
9	3.10E-01	10	3.10E-01	11	3.10E-01	12	3.10E-01
13	3.10E-01	14	3.10E-01	15	3.10E-01	16	3.10E-01
17	3.10E-01	18	3.10E-01	19	3.10E-01	20	3.10E-01
21	3.10E-01	22	3.10E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: GRAIRV

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
616403	6209775	13m	5m	1m	3m

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	2.67E+00	8	2.67E+00
9	2.67E+00	10	2.67E+00	11	2.67E+00	12	2.67E+00
13	2.67E+00	14	2.67E+00	15	2.67E+00	16	2.67E+00
17	2.67E+00	18	2.67E+00	19	2.67E+00	20	2.67E+00
21	2.67E+00	22	2.67E+00	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: HEMSHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617371	6209484	0m	12m	8m	6m

(Constant) emission rate = 1.90E-01 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: GRASHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617317	6209239	0m	12m	8m	6m

(Constant) emission rate = 1.18E+00 kg/hour
No gravitational settling or scavenging.

1

Port Spencer - PM10

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):

612375.m 612425.m 612475.m 612525.m 612575.m 612625.m 612675.m
612725.m 612775.m 612825.m 612875.m 612925.m 612975.m 613025.m
613075.m 613125.m 613175.m 613225.m 613275.m 613325.m 613375.m
613425.m 613475.m 613525.m 613575.m 613625.m 613675.m 613725.m
613775.m 613825.m 613875.m 613925.m 613975.m 614025.m 614075.m
614125.m 614175.m 614225.m 614275.m 614325.m 614375.m 614425.m
614475.m 614525.m 614575.m 614625.m 614675.m 614725.m 614775.m
614825.m 614875.m 614925.m 614975.m 615025.m 615075.m 615125.m
615175.m 615225.m 615275.m 615325.m 615375.m 615425.m 615475.m



APPENDIX B Dispersion Modelling

615525.m 615575.m 615625.m 615675.m 615725.m 615775.m 615825.m
 615875.m 615925.m 615975.m 616025.m 616075.m 616125.m 616175.m
 616225.m 616275.m 616325.m 616375.m 616425.m 616475.m 616525.m
 616575.m 616625.m 616675.m 616725.m 616775.m 616825.m 616875.m
 616925.m 616975.m 617025.m 617075.m 617125.m 617175.m 617225.m
 617275.m 617325.m 617375.m

and these y-values (or northings):

6207375.m 6207425.m 6207475.m 6207525.m 6207575.m 6207625.m 6207675.m
 6207725.m 6207775.m 6207825.m 6207875.m 6207925.m 6207975.m 6208025.m
 6208075.m 6208125.m 6208175.m 6208225.m 6208275.m 6208325.m 6208375.m
 6208425.m 6208475.m 6208525.m 6208575.m 6208625.m 6208675.m 6208725.m
 6208775.m 6208825.m 6208875.m 6208925.m 6208975.m 6209025.m 6209075.m
 6209125.m 6209175.m 6209225.m 6209275.m 6209325.m 6209375.m 6209425.m
 6209475.m 6209525.m 6209575.m 6209625.m 6209675.m 6209725.m 6209775.m
 6209825.m 6209875.m 6209925.m 6209975.m 6210025.m 6210075.m 6210125.m
 6210175.m 6210225.m 6210275.m 6210325.m 6210375.m 6210425.m 6210475.m
 6210525.m 6210575.m 6210625.m 6210675.m 6210725.m 6210775.m 6210825.m
 6210875.m 6210925.m 6210975.m 6211025.m 6211075.m 6211125.m 6211175.m
 6211225.m 6211275.m 6211325.m 6211375.m 6211425.m 6211475.m 6211525.m
 6211575.m 6211625.m 6211675.m 6211725.m 6211775.m 6211825.m 6211875.m
 6211925.m 6211975.m 6212025.m 6212075.m 6212125.m 6212175.m 6212225.m
 6212275.m 6212325.m 6212375.m

METEOROLOGICAL DATA : AUSPLUME METFILE

- 1 Peak values for the 100 worst cases (in microgram/m3)
 Averaging time = 24 hours; Source group No. 1

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	1.06E+02	24,28/04/08	(616275, 6209825, 0.0)
2	8.50E+01	24,08/05/08	(616225, 6209825, 0.0)
3	8.39E+01	24,31/05/08	(616225, 6209825, 0.0)
4	7.06E+01	24,30/12/08	(616275, 6209825, 0.0)
5	7.04E+01	24,12/05/08	(616225, 6209725, 0.0)
6	6.58E+01	24,01/12/08	(616275, 6209825, 0.0)
7	6.51E+01	24,15/12/08	(616275, 6209825, 0.0)
8	6.49E+01	24,02/05/08	(616275, 6209825, 0.0)
9	6.44E+01	24,31/12/08	(616275, 6209825, 0.0)
10	6.43E+01	24,24/07/08	(616275, 6209775, 0.0)
11	6.34E+01	24,29/12/08	(616275, 6209825, 0.0)
12	6.23E+01	24,12/08/08	(616275, 6209825, 0.0)
13	6.15E+01	24,29/05/08	(616275, 6209775, 0.0)
14	6.14E+01	24,22/06/08	(616275, 6209825, 0.0)
15	6.12E+01	24,31/03/08	(616275, 6209825, 0.0)
16	6.10E+01	24,25/12/08	(616225, 6209825, 0.0)
17	5.98E+01	24,28/06/08	(616275, 6209775, 0.0)
18	5.96E+01	24,27/04/08	(616275, 6209825, 0.0)
19	5.73E+01	24,07/07/08	(616275, 6209825, 0.0)
20	5.65E+01	24,05/12/08	(616275, 6209825, 0.0)
21	5.54E+01	24,11/04/08	(616275, 6209825, 0.0)
22	5.54E+01	24,24/03/08	(616275, 6209825, 0.0)
23	5.48E+01	24,25/09/08	(616275, 6209775, 0.0)
24	5.48E+01	24,31/07/08	(616325, 6209775, 0.0)
25	5.45E+01	24,18/05/08	(616275, 6209825, 0.0)
26	5.41E+01	24,05/05/08	(616275, 6209825, 0.0)
27	5.39E+01	24,11/08/08	(616275, 6209825, 0.0)
28	5.37E+01	24,10/05/08	(616225, 6209825, 0.0)
29	5.33E+01	24,04/04/08	(616275, 6209825, 0.0)
30	5.27E+01	24,20/06/08	(616275, 6209825, 0.0)
31	5.15E+01	24,29/11/08	(616275, 6209825, 0.0)
32	5.14E+01	24,02/12/08	(616275, 6209825, 0.0)
33	5.10E+01	24,12/12/08	(616275, 6209825, 0.0)
34	5.07E+01	24,25/04/08	(616275, 6209825, 0.0)



APPENDIX B Dispersion Modelling

35	4.99E+01	24,06/09/08	(616275, 6209775,	0.0)
36	4.91E+01	24,09/05/08	(616175, 6209875,	0.0)
37	4.84E+01	24,21/05/08	(616225, 6209825,	0.0)
38	4.83E+01	24,27/12/08	(616275, 6209825,	0.0)
39	4.81E+01	24,05/11/08	(616275, 6209825,	0.0)
40	4.75E+01	24,12/11/08	(616275, 6209825,	0.0)
41	4.64E+01	24,27/03/08	(616225, 6209875,	0.0)
42	4.63E+01	24,23/09/08	(616275, 6209825,	0.0)
43	4.62E+01	24,11/12/08	(616225, 6209825,	0.0)
44	4.60E+01	24,08/10/08	(616275, 6209825,	0.0)
45	4.57E+01	24,13/03/08	(616275, 6209775,	0.0)
46	4.52E+01	24,26/10/08	(616275, 6209825,	0.0)
47	4.49E+01	24,28/03/08	(616275, 6209825,	0.0)
48	4.46E+01	24,03/04/08	(616275, 6209825,	0.0)
49	4.44E+01	24,26/11/08	(616275, 6209825,	0.0)
50	4.42E+01	24,08/11/08	(616275, 6209825,	0.0)
51	4.42E+01	24,02/07/08	(616275, 6209825,	0.0)
52	4.32E+01	24,16/07/08	(616275, 6209775,	0.0)
53	4.29E+01	24,04/03/08	(616225, 6209825,	0.0)
54	4.23E+01	24,05/07/08	(616275, 6209775,	0.0)
55	4.22E+01	24,14/08/08	(616275, 6209825,	0.0)
56	4.21E+01	24,14/09/08	(616325, 6209775,	0.0)
57	4.15E+01	24,07/11/08	(616325, 6209825,	0.0)
58	4.15E+01	24,17/05/08	(616275, 6209825,	0.0)
59	4.14E+01	24,09/07/08	(616325, 6209775,	0.0)
60	4.10E+01	24,10/07/08	(616275, 6209825,	0.0)
61	4.10E+01	24,01/07/08	(616275, 6209825,	0.0)
62	4.00E+01	24,14/06/08	(616225, 6209825,	0.0)
63	3.98E+01	24,15/09/08	(616325, 6209825,	0.0)
64	3.94E+01	24,13/07/08	(616325, 6209775,	0.0)
65	3.94E+01	24,09/08/08	(616275, 6209825,	0.0)
66	3.94E+01	24,08/07/08	(616275, 6209825,	0.0)
67	3.93E+01	24,11/07/08	(616275, 6209775,	0.0)
68	3.92E+01	24,18/08/08	(616275, 6209825,	0.0)
69	3.91E+01	24,29/03/08	(616275, 6209825,	0.0)
70	3.88E+01	24,04/05/08	(616275, 6209825,	0.0)
71	3.85E+01	24,27/07/08	(616275, 6209825,	0.0)
72	3.81E+01	24,23/12/08	(616225, 6209875,	0.0)
73	3.81E+01	24,28/09/08	(616275, 6209825,	0.0)
74	3.81E+01	24,13/04/08	(616275, 6209875,	0.0)
75	3.74E+01	24,12/01/08	(616275, 6209825,	0.0)
76	3.72E+01	24,06/05/08	(616275, 6209825,	0.0)
77	3.72E+01	24,11/06/08	(616325, 6209775,	0.0)
78	3.66E+01	24,11/10/08	(616225, 6209825,	0.0)
79	3.65E+01	24,12/04/08	(616275, 6209825,	0.0)
80	3.63E+01	24,07/03/08	(616275, 6209825,	0.0)
81	3.63E+01	24,08/08/08	(616275, 6209825,	0.0)
82	3.62E+01	24,06/08/08	(616275, 6209825,	0.0)
83	3.60E+01	24,20/05/08	(616275, 6209825,	0.0)
84	3.58E+01	24,01/04/08	(616275, 6209775,	0.0)
85	3.55E+01	24,29/09/08	(616225, 6209825,	0.0)
86	3.55E+01	24,25/03/08	(616275, 6209825,	0.0)
87	3.54E+01	24,01/01/08	(616275, 6209875,	0.0)
88	3.53E+01	24,15/08/08	(616275, 6209825,	0.0)
89	3.53E+01	24,03/07/08	(616275, 6209825,	0.0)
90	3.53E+01	24,23/06/08	(616275, 6209825,	0.0)
91	3.53E+01	24,22/07/08	(616225, 6209825,	0.0)
92	3.51E+01	24,09/01/08	(616225, 6209825,	0.0)
93	3.50E+01	24,30/03/08	(616275, 6209825,	0.0)
94	3.47E+01	24,14/07/08	(616275, 6209825,	0.0)
95	3.47E+01	24,21/06/08	(616275, 6209825,	0.0)
96	3.41E+01	24,06/11/08	(616225, 6209825,	0.0)
97	3.41E+01	24,02/04/08	(616275, 6209825,	0.0)
98	3.40E+01	24,07/10/08	(616275, 6209825,	0.0)
99	3.38E+01	24,25/11/08	(616225, 6209825,	0.0)
100	3.36E+01	24,28/01/08	(616225, 6209825,	0.0)



APPENDIX B Dispersion Modelling

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 2

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	1.12E+03	24,08/05/08	(616375, 6209775, 0.0)
2	1.12E+03	24,28/04/08	(616425, 6209775, 0.0)
3	1.09E+03	24,15/12/08	(616425, 6209775, 0.0)
4	1.05E+03	24,31/05/08	(616375, 6209775, 0.0)
5	9.05E+02	24,25/04/08	(616425, 6209775, 0.0)
6	8.39E+02	24,26/10/08	(616425, 6209775, 0.0)
7	8.31E+02	24,05/05/08	(616425, 6209775, 0.0)
8	8.11E+02	24,18/05/08	(616425, 6209775, 0.0)
9	7.85E+02	24,22/06/08	(616425, 6209775, 0.0)
10	7.83E+02	24,31/03/08	(616425, 6209775, 0.0)
11	7.76E+02	24,26/11/08	(616425, 6209775, 0.0)
12	7.72E+02	24,17/05/08	(616425, 6209775, 0.0)
13	7.61E+02	24,25/12/08	(616375, 6209775, 0.0)
14	7.57E+02	24,05/11/08	(616425, 6209775, 0.0)
15	7.57E+02	24,02/05/08	(616425, 6209775, 0.0)
16	7.41E+02	24,01/07/08	(616425, 6209775, 0.0)
17	7.32E+02	24,27/04/08	(616425, 6209775, 0.0)
18	7.26E+02	24,12/08/08	(616425, 6209775, 0.0)
19	7.16E+02	24,11/04/08	(616425, 6209775, 0.0)
20	7.09E+02	24,01/08/08	(616425, 6209775, 0.0)
21	7.02E+02	24,01/12/08	(616425, 6209775, 0.0)
22	7.00E+02	24,07/07/08	(616425, 6209775, 0.0)
23	6.99E+02	24,24/03/08	(616425, 6209775, 0.0)
24	6.88E+02	24,31/12/08	(616425, 6209775, 0.0)
25	6.85E+02	24,30/12/08	(616425, 6209775, 0.0)
26	6.84E+02	24,02/07/08	(616425, 6209775, 0.0)
27	6.48E+02	24,12/05/08	(616375, 6209725, 0.0)
28	6.41E+02	24,21/05/08	(616375, 6209775, 0.0)
29	6.41E+02	24,06/05/08	(616425, 6209775, 0.0)
30	6.41E+02	24,15/09/08	(616425, 6209775, 0.0)
31	6.39E+02	24,15/07/08	(616425, 6209775, 0.0)
32	6.36E+02	24,11/08/08	(616425, 6209775, 0.0)
33	6.24E+02	24,03/07/08	(616425, 6209775, 0.0)
34	6.17E+02	24,30/03/08	(616425, 6209775, 0.0)
35	6.06E+02	24,04/03/08	(616375, 6209775, 0.0)
36	6.00E+02	24,01/05/08	(616425, 6209775, 0.0)
37	5.99E+02	24,10/05/08	(616375, 6209775, 0.0)
38	5.78E+02	24,11/12/08	(616375, 6209775, 0.0)
39	5.75E+02	24,05/12/08	(616425, 6209775, 0.0)
40	5.62E+02	24,03/04/08	(616425, 6209775, 0.0)
41	5.60E+02	24,26/06/08	(616425, 6209775, 0.0)
42	5.53E+02	24,29/11/08	(616425, 6209775, 0.0)
43	5.50E+02	24,08/07/08	(616425, 6209775, 0.0)
44	5.41E+02	24,28/03/08	(616425, 6209775, 0.0)
45	5.32E+02	24,27/12/08	(616425, 6209775, 0.0)
46	5.26E+02	24,25/07/08	(616425, 6209775, 0.0)
47	5.17E+02	24,14/06/08	(616375, 6209775, 0.0)
48	5.15E+02	24,25/11/08	(616375, 6209775, 0.0)
49	5.13E+02	24,22/07/08	(616375, 6209775, 0.0)
50	5.13E+02	24,12/11/08	(616425, 6209775, 0.0)
51	5.11E+02	24,29/12/08	(616425, 6209775, 0.0)
52	5.09E+02	24,02/12/08	(616425, 6209775, 0.0)
53	5.07E+02	24,20/06/08	(616425, 6209775, 0.0)
54	5.07E+02	24,29/03/08	(616425, 6209775, 0.0)
55	4.94E+02	24,11/10/08	(616375, 6209775, 0.0)
56	4.91E+02	24,23/12/08	(616375, 6209825, 0.0)
57	4.86E+02	24,23/09/08	(616425, 6209775, 0.0)
58	4.77E+02	24,04/04/08	(616475, 6209825, 0.0)
59	4.64E+02	24,08/10/08	(616425, 6209775, 0.0)
60	4.53E+02	24,10/07/08	(616425, 6209775, 0.0)
61	4.47E+02	24,20/09/08	(616425, 6209775, 0.0)
62	4.45E+02	24,09/01/08	(616425, 6209825, 0.0)
63	4.45E+02	24,31/08/08	(616425, 6209775, 0.0)
64	4.41E+02	24,07/08/08	(616425, 6209775, 0.0)
65	4.40E+02	24,07/05/08	(616425, 6209825, 0.0)



APPENDIX B Dispersion Modelling

66	4.37E+02	24,07/11/08	(616425, 6209775, 0.0)
67	4.26E+02	24,30/06/08	(616425, 6209775, 0.0)
68	4.21E+02	24,17/07/08	(616425, 6209775, 0.0)
69	4.20E+02	24,29/09/08	(616375, 6209775, 0.0)
70	4.16E+02	24,27/03/08	(616375, 6209825, 0.0)
71	4.12E+02	24,25/05/08	(616425, 6209775, 0.0)
72	4.07E+02	24,07/10/08	(616425, 6209775, 0.0)
73	4.04E+02	24,06/07/08	(616425, 6209775, 0.0)
74	3.98E+02	24,18/09/08	(616425, 6209775, 0.0)
75	3.91E+02	24,16/05/08	(616425, 6209775, 0.0)
76	3.91E+02	24,02/08/08	(616425, 6209725, 0.0)
77	3.90E+02	24,30/10/08	(616425, 6209775, 0.0)
78	3.88E+02	24,20/05/08	(616425, 6209825, 0.0)
79	3.86E+02	24,18/08/08	(616425, 6209775, 0.0)
80	3.85E+02	24,23/02/08	(616425, 6209825, 0.0)
81	3.84E+02	24,25/03/08	(616425, 6209775, 0.0)
82	3.81E+02	24,13/04/08	(616425, 6209825, 0.0)
83	3.81E+02	24,22/08/08	(616425, 6209825, 0.0)
84	3.80E+02	24,07/03/08	(616375, 6209775, 0.0)
85	3.79E+02	24,05/08/08	(616425, 6209775, 0.0)
86	3.78E+02	24,01/03/08	(616375, 6209775, 0.0)
87	3.75E+02	24,06/12/08	(616425, 6209825, 0.0)
88	3.71E+02	24,06/11/08	(616375, 6209775, 0.0)
89	3.69E+02	24,26/04/08	(616425, 6209775, 0.0)
90	3.65E+02	24,16/10/08	(616375, 6209775, 0.0)
91	3.65E+02	24,01/09/08	(616425, 6209775, 0.0)
92	3.62E+02	24,01/10/08	(616425, 6209775, 0.0)
93	3.59E+02	24,08/11/08	(616425, 6209775, 0.0)
94	3.59E+02	24,04/09/08	(616375, 6209775, 0.0)
95	3.57E+02	24,14/07/08	(616425, 6209775, 0.0)
96	3.56E+02	24,05/07/08	(616425, 6209725, 0.0)
97	3.55E+02	24,14/08/08	(616425, 6209825, 0.0)
98	3.52E+02	24,05/04/08	(616375, 6209775, 0.0)
99	3.51E+02	24,19/01/08	(616425, 6209825, 0.0)
100	3.50E+02	24,14/03/08	(616425, 6209775, 0.0)

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 3

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	1.13E+03	24,28/04/08	(616425, 6209775, 0.0)
2	1.12E+03	24,08/05/08	(616375, 6209775, 0.0)
3	1.10E+03	24,15/12/08	(616425, 6209775, 0.0)
4	1.05E+03	24,31/05/08	(616375, 6209775, 0.0)
5	9.20E+02	24,25/04/08	(616425, 6209775, 0.0)
6	8.52E+02	24,05/05/08	(616425, 6209775, 0.0)
7	8.41E+02	24,26/10/08	(616425, 6209775, 0.0)
8	8.24E+02	24,18/05/08	(616425, 6209775, 0.0)
9	7.94E+02	24,31/03/08	(616425, 6209775, 0.0)
10	7.93E+02	24,22/06/08	(616425, 6209775, 0.0)
11	7.84E+02	24,26/11/08	(616425, 6209775, 0.0)
12	7.78E+02	24,17/05/08	(616425, 6209775, 0.0)
13	7.71E+02	24,02/05/08	(616425, 6209775, 0.0)
14	7.66E+02	24,05/11/08	(616425, 6209775, 0.0)
15	7.65E+02	24,25/12/08	(616375, 6209775, 0.0)
16	7.60E+02	24,01/07/08	(616425, 6209775, 0.0)
17	7.33E+02	24,27/04/08	(616425, 6209775, 0.0)
18	7.31E+02	24,12/08/08	(616425, 6209775, 0.0)
19	7.25E+02	24,01/08/08	(616425, 6209775, 0.0)
20	7.20E+02	24,11/04/08	(616425, 6209775, 0.0)
21	7.10E+02	24,01/12/08	(616425, 6209775, 0.0)
22	7.09E+02	24,24/03/08	(616425, 6209775, 0.0)
23	7.00E+02	24,07/07/08	(616425, 6209775, 0.0)
24	6.91E+02	24,31/12/08	(616425, 6209775, 0.0)
25	6.90E+02	24,02/07/08	(616425, 6209775, 0.0)
26	6.89E+02	24,30/12/08	(616425, 6209775, 0.0)



APPENDIX B Dispersion Modelling

27	6.63E+02	24,12/05/08	(616375, 6209725,	0.0)
28	6.53E+02	24,15/07/08	(616425, 6209775,	0.0)
29	6.52E+02	24,11/08/08	(616425, 6209775,	0.0)
30	6.52E+02	24,06/05/08	(616425, 6209775,	0.0)
31	6.42E+02	24,15/09/08	(616425, 6209775,	0.0)
32	6.42E+02	24,21/05/08	(616375, 6209775,	0.0)
33	6.34E+02	24,30/03/08	(616425, 6209775,	0.0)
34	6.27E+02	24,03/07/08	(616425, 6209775,	0.0)
35	6.20E+02	24,01/05/08	(616425, 6209775,	0.0)
36	6.07E+02	24,04/03/08	(616375, 6209775,	0.0)
37	6.02E+02	24,10/05/08	(616375, 6209775,	0.0)
38	5.84E+02	24,05/12/08	(616425, 6209775,	0.0)
39	5.84E+02	24,26/06/08	(616425, 6209775,	0.0)
40	5.79E+02	24,11/12/08	(616375, 6209775,	0.0)
41	5.70E+02	24,08/07/08	(616425, 6209775,	0.0)
42	5.68E+02	24,03/04/08	(616425, 6209775,	0.0)
43	5.63E+02	24,29/11/08	(616425, 6209775,	0.0)
44	5.50E+02	24,28/03/08	(616425, 6209775,	0.0)
45	5.36E+02	24,25/07/08	(616425, 6209775,	0.0)
46	5.34E+02	24,27/12/08	(616425, 6209775,	0.0)
47	5.21E+02	24,25/11/08	(616375, 6209775,	0.0)
48	5.18E+02	24,14/06/08	(616375, 6209775,	0.0)
49	5.16E+02	24,29/03/08	(616425, 6209775,	0.0)
50	5.16E+02	24,02/12/08	(616425, 6209775,	0.0)
51	5.14E+02	24,22/07/08	(616375, 6209775,	0.0)
52	5.14E+02	24,12/11/08	(616425, 6209775,	0.0)
53	5.13E+02	24,29/12/08	(616425, 6209775,	0.0)
54	5.11E+02	24,20/06/08	(616425, 6209775,	0.0)
55	4.95E+02	24,23/09/08	(616425, 6209775,	0.0)
56	4.94E+02	24,11/10/08	(616375, 6209775,	0.0)
57	4.91E+02	24,23/12/08	(616375, 6209825,	0.0)
58	4.82E+02	24,04/04/08	(616475, 6209825,	0.0)
59	4.74E+02	24,08/10/08	(616425, 6209775,	0.0)
60	4.60E+02	24,10/07/08	(616425, 6209775,	0.0)
61	4.56E+02	24,31/08/08	(616425, 6209775,	0.0)
62	4.55E+02	24,20/09/08	(616425, 6209775,	0.0)
63	4.53E+02	24,07/08/08	(616425, 6209775,	0.0)
64	4.46E+02	24,09/01/08	(616425, 6209825,	0.0)
65	4.46E+02	24,17/07/08	(616425, 6209775,	0.0)
66	4.45E+02	24,30/06/08	(616425, 6209775,	0.0)
67	4.43E+02	24,07/05/08	(616425, 6209825,	0.0)
68	4.42E+02	24,07/11/08	(616425, 6209775,	0.0)
69	4.28E+02	24,25/05/08	(616425, 6209775,	0.0)
70	4.24E+02	24,06/07/08	(616425, 6209775,	0.0)
71	4.21E+02	24,29/09/08	(616375, 6209775,	0.0)
72	4.19E+02	24,07/10/08	(616425, 6209775,	0.0)
73	4.16E+02	24,27/03/08	(616375, 6209825,	0.0)
74	4.16E+02	24,18/09/08	(616425, 6209775,	0.0)
75	4.03E+02	24,30/10/08	(616425, 6209775,	0.0)
76	4.00E+02	24,18/08/08	(616425, 6209775,	0.0)
77	3.99E+02	24,02/08/08	(616425, 6209725,	0.0)
78	3.94E+02	24,16/05/08	(616425, 6209775,	0.0)
79	3.93E+02	24,20/05/08	(616425, 6209825,	0.0)
80	3.90E+02	24,01/09/08	(616425, 6209775,	0.0)
81	3.88E+02	24,23/02/08	(616425, 6209825,	0.0)
82	3.87E+02	24,05/08/08	(616425, 6209775,	0.0)
83	3.87E+02	24,22/08/08	(616425, 6209825,	0.0)
84	3.87E+02	24,13/04/08	(616425, 6209825,	0.0)
85	3.86E+02	24,25/03/08	(616425, 6209775,	0.0)
86	3.82E+02	24,07/03/08	(616375, 6209775,	0.0)
87	3.79E+02	24,26/04/08	(616425, 6209775,	0.0)
88	3.79E+02	24,01/03/08	(616375, 6209775,	0.0)
89	3.76E+02	24,06/12/08	(616425, 6209825,	0.0)
90	3.72E+02	24,06/11/08	(616375, 6209775,	0.0)
91	3.68E+02	24,01/10/08	(616425, 6209775,	0.0)
92	3.65E+02	24,16/10/08	(616375, 6209775,	0.0)
93	3.65E+02	24,08/11/08	(616425, 6209775,	0.0)
94	3.59E+02	24,04/09/08	(616375, 6209775,	0.0)
95	3.59E+02	24,14/07/08	(616425, 6209775,	0.0)
96	3.58E+02	24,14/08/08	(616425, 6209825,	0.0)
97	3.56E+02	24,12/03/08	(616375, 6209775,	0.0)



APPENDIX B Dispersion Modelling

98 3.56E+02 24,05/07/08 (616425, 6209725, 0.0)
 99 3.53E+02 24,14/03/08 (616425, 6209775, 0.0)
 100 3.52E+02 24,05/04/08 (616375, 6209775, 0.0)

1.1.2 Discrete Receptors: Sensitive Receptors

Port Spencer - PM10 - Discrete Receptors

Concentration or deposition	Concentration
Emission rate units	kg/hour
Concentration units	microgram/m3
Units conversion factor	2.78E+05
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m
Use the convective PDF algorithm?	No
Averaging time for sigma-theta values	60 min.

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Sigma-theta
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.100m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients given by the hourly met. file, a value from the following table (in K/m) is used:

Wind Speed	Stability Class
------------	-----------------



APPENDIX B Dispersion Modelling

Category	A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES

Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES

24 hours

Port Spencer - PM10 - Discrete Receptors

SOURCE GROUPS

Group No. Members

- | | |
|---|---|
| 1 | HEMA-R HEMA-S GENRTR TP-H1 TP-H2 TP-H3 TP-H4
HEMARV HEMSHP |
| 2 | GRAI-R GENRTR TP-G1 TP-G2 TP-G3 TP-G4 GRAIRV
GRASHP |
| 3 | HEMA-R HEMA-S GRAI-R GENRTR TP-H1 TP-H2 TP-H3
TP-H4 TP-G1 TP-G2 TP-G3 TP-G4 HEMARV GRAIRV

HEMSHP GRASHP |

1

Port Spencer - PM10 - Discrete Receptors

SOURCE CHARACTERISTICS

STACK SOURCE: HEMA-R

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616265	6209823	9m	0m	1.06m	25C	16.0m/s



APPENDIX B Dispersion Modelling

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	5.04E-01	8	5.04E-01
9	5.04E-01	10	5.04E-01	11	5.04E-01	12	5.04E-01
13	5.04E-01	14	5.04E-01	15	5.04E-01	16	5.04E-01
17	5.04E-01	18	5.04E-01	19	5.04E-01	20	5.04E-01
21	5.04E-01	22	5.04E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

STACK SOURCE: HEMA-S

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616187	6209589	13m	23m	1.67m	25C	16.0m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	140	164	184	198	205	207	203	202	206	205	196	183
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	205	197	182	163	139	110	78	79	111	140	164	184
Along-flow distance from stack	-10	-15	-19	-23	-25	-28	-29	-47	-80	-111	-139	-162
Across-flow distance from stack	41	56	70	82	91	97	100	101	98	92	84	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	140	164	184	198	205	207
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	198	206	207	203	202	206	205	196	182	163	139	110
Along-flow distance from stack	-180	-193	-200	-202	-202	-201	-195	-182	-164	-141	-113	-83
Across-flow distance from stack	59	44	28	10	-7	-25	-41	-56	-70	-81	-91	-97



APPENDIX B Dispersion Modelling

Flow direction	250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
Effective building width	203 202 206 204 197 183 163 139 110 78 79 111
Effective building height	14 14 14 14 14 14 14 14 14 14 14 14
Along-flow building length	78 79 111 140 164 184 198 206 208 203 202 206
Along-flow distance from stack	-49 -32 -31 -29 -26 -22 -17 -13 -7 -1 0 -5
Across-flow distance from stack	-100 -101 -98 -92 -84 -72 -59 -44 -27 -10 7 25

(Constant) emission rate = 1.26E+00 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: GRAI-R

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616403	6209775	14m	0m	1.11m	25C	16.0m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
Effective building width	188 179 165 146 122 95 64 67 97 125 148 167
Effective building height	14 14 14 14 14 14 14 14 14 14 14 14
Along-flow building length	125 148 167 181 190 192 189 188 191 188 179 165
Along-flow distance from stack	-22 -17 -12 -7 -1 5 10 12 8 4 0 -5
Across-flow distance from stack	-98 -89 -78 -64 -49 -32 -14 5 24 41 58 72

Flow direction	130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
Effective building width	181 190 192 0 0 0 188 179 165 146 122 95
Effective building height	14 14 14 0 0 0 14 14 14 14 14 14
Along-flow building length	146 122 95 0 0 0 125 148 167 181 190 192
Along-flow distance from stack	-9 -13 -16 0 0 0 -104 -132 -156 -175 -189 -197
Across-flow distance from stack	84 94 101 0 0 0 98 89 78 64 49 31

Flow direction	250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
Effective building width	65 67 97 125 148 167 181 190 192 0 0 0
Effective building height	14 14 14 14 14 14 14 14 14 0 0 0
Along-flow building length	189 188 191 188 179 165 146 122 95 0 0 0
Along-flow distance from stack	-200 -200 -199 -192 -179 -160 -137 -110 -79 0 0 0
Across-flow distance from stack	13 -6 -24 -41 -57 -72 -85 -94 -101 0 0 0

Emission rates by hour of day in kg/hour:

1 0.00E+00	2 0.00E+00	3 0.00E+00	4 0.00E+00
5 0.00E+00	6 0.00E+00	7 5.58E-01	8 5.58E-01
9 5.58E-01	10 5.58E-01	11 5.58E-01	12 5.58E-01
13 5.58E-01	14 5.58E-01	15 5.58E-01	16 5.58E-01
17 5.58E-01	18 5.58E-01	19 5.58E-01	20 5.58E-01
21 5.58E-01	22 5.58E-01	23 0.00E+00	24 0.00E+00

No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

STACK SOURCE: GENRTR

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616127 6209440 15m 5m 1.10m 300C 30.0m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.43E-01 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616223 6209554 15m 3m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	196	183
Effective building height	0	0	0	0	0	0	0	0	0	0	14	14
Along-flow building length	0	0	0	0	0	0	0	0	0	0	164	184
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	-184	-210
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	104	85

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	198	206	207	203	202	206	0	0	0	0	0	0
Along-flow distance from stack	-230	-243	-249	-247	-243	-236	0	0	0	0	0	0
Across-flow distance from stack	63	39	14	-12	-37	-61	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	197	183	0	0	0	0	0	0
Effective building height	0	0	0	0	14	14	0	0	0	0	0	0



APPENDIX B Dispersion Modelling

Along-flow building length 0 0 0 0 164 184 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 20 27 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 -104 -85 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616666 6209673 14m 7m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H3

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617308 6209513 0m 5m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0



APPENDIX B Dispersion Modelling

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617298 6209466 0m 7m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

STACK SOURCE: TP-G1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616624 6209832 15m 3m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	165	146	122	95	64	67	97	125	148	167
Effective building height	0	0	14	14	14	14	14	14	14	14	14	14
Along-flow building length	0	0	167	181	190	192	189	188	191	188	179	165
Along-flow distance from stack	0	0	-172	-192	-207	-215	-217	-216	-213	-204	-189	-167
Across-flow distance from stack	0	0	85	68	50	30	9	-13	-34	-54	-72	-88

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	165	146	122	95
Effective building height	0	0	0	0	0	0	0	0	14	14	14	14
Along-flow building length	0	0	0	0	0	0	0	0	167	181	190	192
Along-flow distance from stack	0	0	0	0	0	0	0	0	5	11	17	23
Across-flow distance from stack	0	0	0	0	0	0	0	0	-85	-69	-50	-30

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	65	67	97	125	148	167	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	189	188	191	188	179	165	0	0	0	0	0	0
Along-flow distance from stack	28	27	22	16	9	3	0	0	0	0	0	0
Across-flow distance from stack	-9	13	34	53	72	88	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616666 6209673 14m 7m 0.36m 25C 11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B Dispersion Modelling

Flow direction	250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
Effective building width	0 0 0 0 0 0 0 0 0 0 0 0
Effective building height	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow building length	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0
Across-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G3

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
617308	6209513	0m	5m	0.36m	25C	11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
Effective building width	0 0 0 0 0 0 0 0 0 0 0 0
Effective building height	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow building length	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0
Across-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0

Flow direction	130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
Effective building width	0 0 0 0 0 0 0 0 0 0 0 0
Effective building height	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow building length	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0
Across-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0

Flow direction	250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
Effective building width	0 0 0 0 0 0 0 0 0 0 0 0
Effective building height	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow building length	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0
Across-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G4

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
617249	6209280	0m	7m	0.36m	25C	11.1m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
Effective building width	0 0 0 0 0 0 0 0 0 0 0 0
Effective building height	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow building length	0 0 0 0 0 0 0 0 0 0 0 0
Along-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0
Across-flow distance from stack	0 0 0 0 0 0 0 0 0 0 0 0



APPENDIX B Dispersion Modelling

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: HEMARV

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
616265	6209823	9m	5m	1m	3m

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	3.10E-01	8	3.10E-01
9	3.10E-01	10	3.10E-01	11	3.10E-01	12	3.10E-01
13	3.10E-01	14	3.10E-01	15	3.10E-01	16	3.10E-01
17	3.10E-01	18	3.10E-01	19	3.10E-01	20	3.10E-01
21	3.10E-01	22	3.10E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: GRAIRV

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
616403	6209775	13m	5m	1m	3m

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	2.67E+00	8	2.67E+00
9	2.67E+00	10	2.67E+00	11	2.67E+00	12	2.67E+00
13	2.67E+00	14	2.67E+00	15	2.67E+00	16	2.67E+00
17	2.67E+00	18	2.67E+00	19	2.67E+00	20	2.67E+00
21	2.67E+00	22	2.67E+00	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

VOLUME SOURCE: HEMSHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617371	6209484	0m	12m	8m	6m

(Constant) emission rate = 1.90E-01 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: GRASHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617317	6209239	0m	12m	8m	6m

(Constant) emission rate = 1.18E+00 kg/hour
No gravitational settling or scavenging.

Port Spencer - PM10 - Discrete Receptors

RECEPTOR LOCATIONS

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	616063	6210808	23.0	0.0	4	613277	6208896	73.0	0.0
2	614615	6210260	48.0	0.0	5	612459	6211089	68.0	0.0
3	613977	6211372	93.0	0.0					

METEOROLOGICAL DATA : AUSPLUME METFILE

1 Peak values for the 100 worst cases (in microgram/m3)

Averaging time = 24 hours; Source group No. 1

Rank	Value	Time Recorded	Coordinates
		hour,date	(* denotes polar)
1	4.53E+00	24,05/09/08	(616063, 6210808, 0.0)
2	3.85E+00	24,29/01/08	(616063, 6210808, 0.0)
3	3.35E+00	24,03/01/08	(616063, 6210808, 0.0)
4	3.26E+00	24,11/03/08	(616063, 6210808, 0.0)
5	3.14E+00	24,27/10/08	(616063, 6210808, 0.0)
6	2.97E+00	24,24/02/08	(616063, 6210808, 0.0)
7	2.96E+00	24,30/01/08	(616063, 6210808, 0.0)
8	2.70E+00	24,27/08/08	(614615, 6210260, 0.0)
9	2.60E+00	24,13/08/08	(616063, 6210808, 0.0)
10	2.59E+00	24,30/05/08	(614615, 6210260, 0.0)
11	2.48E+00	24,07/02/08	(616063, 6210808, 0.0)
12	2.44E+00	24,10/05/08	(613977, 6211372, 0.0)
13	2.40E+00	24,19/10/08	(616063, 6210808, 0.0)
14	2.37E+00	24,24/12/08	(616063, 6210808, 0.0)
15	2.33E+00	24,27/01/08	(616063, 6210808, 0.0)
16	2.30E+00	24,19/06/08	(616063, 6210808, 0.0)
17	2.21E+00	24,15/11/08	(616063, 6210808, 0.0)



APPENDIX B Dispersion Modelling

18	2.19E+00	24,26/08/08	(616063, 6210808,	0.0)
19	2.17E+00	24,16/02/08	(616063, 6210808,	0.0)
20	2.11E+00	24,04/09/08	(613977, 6211372,	0.0)
21	2.04E+00	24,08/09/08	(614615, 6210260,	0.0)
22	2.03E+00	24,06/02/08	(616063, 6210808,	0.0)
23	1.97E+00	24,27/02/08	(616063, 6210808,	0.0)
24	1.94E+00	24,06/01/08	(616063, 6210808,	0.0)
25	1.88E+00	24,14/01/08	(616063, 6210808,	0.0)
26	1.82E+00	24,09/05/08	(614615, 6210260,	0.0)
27	1.80E+00	24,24/01/08	(616063, 6210808,	0.0)
28	1.78E+00	24,20/04/08	(613277, 6208896,	0.0)
29	1.75E+00	24,07/01/08	(616063, 6210808,	0.0)
30	1.75E+00	24,13/02/08	(613977, 6211372,	0.0)
31	1.64E+00	24,12/03/08	(616063, 6210808,	0.0)
32	1.62E+00	24,26/02/08	(616063, 6210808,	0.0)
33	1.61E+00	24,25/12/08	(614615, 6210260,	0.0)
34	1.60E+00	24,29/02/08	(614615, 6210260,	0.0)
35	1.59E+00	24,28/01/08	(616063, 6210808,	0.0)
36	1.59E+00	24,04/02/08	(616063, 6210808,	0.0)
37	1.58E+00	24,07/06/08	(614615, 6210260,	0.0)
38	1.58E+00	24,02/02/08	(616063, 6210808,	0.0)
39	1.58E+00	24,03/11/08	(616063, 6210808,	0.0)
40	1.55E+00	24,09/12/08	(616063, 6210808,	0.0)
41	1.54E+00	24,16/12/08	(614615, 6210260,	0.0)
42	1.53E+00	24,16/01/08	(616063, 6210808,	0.0)
43	1.52E+00	24,15/03/08	(616063, 6210808,	0.0)
44	1.49E+00	24,21/04/08	(614615, 6210260,	0.0)
45	1.49E+00	24,21/03/08	(613977, 6211372,	0.0)
46	1.47E+00	24,21/10/08	(614615, 6210260,	0.0)
47	1.45E+00	24,08/06/08	(613277, 6208896,	0.0)
48	1.45E+00	24,14/06/08	(614615, 6210260,	0.0)
49	1.42E+00	24,23/11/08	(614615, 6210260,	0.0)
50	1.41E+00	24,22/04/08	(613277, 6208896,	0.0)
51	1.37E+00	24,04/03/08	(613277, 6208896,	0.0)
52	1.37E+00	24,14/10/08	(616063, 6210808,	0.0)
53	1.34E+00	24,15/01/08	(613977, 6211372,	0.0)
54	1.33E+00	24,08/05/08	(614615, 6210260,	0.0)
55	1.32E+00	24,04/10/08	(614615, 6210260,	0.0)
56	1.27E+00	24,14/11/08	(616063, 6210808,	0.0)
57	1.27E+00	24,07/09/08	(616063, 6210808,	0.0)
58	1.27E+00	24,15/02/08	(614615, 6210260,	0.0)
59	1.26E+00	24,21/07/08	(616063, 6210808,	0.0)
60	1.26E+00	24,08/12/08	(614615, 6210260,	0.0)
61	1.23E+00	24,25/01/08	(616063, 6210808,	0.0)
62	1.21E+00	24,23/03/08	(613977, 6211372,	0.0)
63	1.21E+00	24,20/12/08	(613277, 6208896,	0.0)
64	1.19E+00	24,03/02/08	(616063, 6210808,	0.0)
65	1.19E+00	24,25/11/08	(613277, 6208896,	0.0)
66	1.16E+00	24,11/01/08	(616063, 6210808,	0.0)
67	1.14E+00	24,09/01/08	(616063, 6210808,	0.0)
68	1.13E+00	24,19/12/08	(614615, 6210260,	0.0)
69	1.13E+00	24,06/11/08	(614615, 6210260,	0.0)
70	1.09E+00	24,19/11/08	(616063, 6210808,	0.0)
71	1.08E+00	24,27/03/08	(616063, 6210808,	0.0)



APPENDIX B Dispersion Modelling

72	1.08E+00	24,15/04/08	(614615, 6210260, 0.0)
73	1.08E+00	24,11/11/08	(616063, 6210808, 0.0)
74	1.07E+00	24,17/04/08	(614615, 6210260, 0.0)
75	1.06E+00	24,08/01/08	(616063, 6210808, 0.0)
76	1.03E+00	24,23/08/08	(614615, 6210260, 0.0)
77	1.02E+00	24,26/03/08	(616063, 6210808, 0.0)
78	1.02E+00	24,17/12/08	(614615, 6210260, 0.0)
79	9.88E-01	24,21/05/08	(614615, 6210260, 0.0)
80	9.85E-01	24,11/12/08	(613277, 6208896, 0.0)
81	9.83E-01	24,14/02/08	(614615, 6210260, 0.0)
82	9.83E-01	24,27/11/08	(616063, 6210808, 0.0)
83	9.76E-01	24,27/05/08	(616063, 6210808, 0.0)
84	9.70E-01	24,16/10/08	(613277, 6208896, 0.0)
85	9.60E-01	24,03/03/08	(613277, 6208896, 0.0)
86	9.48E-01	24,16/11/08	(613977, 6211372, 0.0)
87	9.25E-01	24,25/02/08	(616063, 6210808, 0.0)
88	9.19E-01	24,26/09/08	(616063, 6210808, 0.0)
89	9.10E-01	24,29/09/08	(613277, 6208896, 0.0)
90	9.03E-01	24,28/10/08	(613977, 6211372, 0.0)
91	8.97E-01	24,31/10/08	(616063, 6210808, 0.0)
92	8.95E-01	24,31/05/08	(613277, 6208896, 0.0)
93	8.88E-01	24,22/11/08	(616063, 6210808, 0.0)
94	8.75E-01	24,22/07/08	(613277, 6208896, 0.0)
95	8.68E-01	24,08/03/08	(613277, 6208896, 0.0)
96	8.57E-01	24,21/02/08	(616063, 6210808, 0.0)
97	8.53E-01	24,13/01/08	(616063, 6210808, 0.0)
98	8.42E-01	24,20/02/08	(616063, 6210808, 0.0)
99	8.31E-01	24,07/12/08	(616063, 6210808, 0.0)
100	8.20E-01	24,06/09/08	(614615, 6210260, 0.0)

1 Peak values for the 100 worst cases (in microgram/m3)

Averaging time = 24 hours; Source group No. 2

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	1.41E+01	24,05/09/08	(616063, 6210808, 0.0)
2	1.05E+01	24,10/05/08	(613977, 6211372, 0.0)
3	8.65E+00	24,30/05/08	(614615, 6210260, 0.0)
4	8.48E+00	24,07/02/08	(616063, 6210808, 0.0)
5	8.26E+00	24,29/01/08	(616063, 6210808, 0.0)
6	7.85E+00	24,26/08/08	(616063, 6210808, 0.0)
7	7.54E+00	24,22/03/08	(616063, 6210808, 0.0)
8	6.64E+00	24,21/07/08	(616063, 6210808, 0.0)
9	6.12E+00	24,27/08/08	(614615, 6210260, 0.0)
10	6.06E+00	24,27/03/08	(616063, 6210808, 0.0)
11	6.01E+00	24,25/02/08	(616063, 6210808, 0.0)
12	5.76E+00	24,24/02/08	(616063, 6210808, 0.0)



APPENDIX B Dispersion Modelling

13	5.69E+00	24,04/06/08	(616063, 6210808,	0.0)
14	5.45E+00	24,14/01/08	(616063, 6210808,	0.0)
15	5.44E+00	24,11/03/08	(616063, 6210808,	0.0)
16	5.43E+00	24,15/10/08	(616063, 6210808,	0.0)
17	5.42E+00	24,30/01/08	(616063, 6210808,	0.0)
18	5.14E+00	24,16/02/08	(616063, 6210808,	0.0)
19	4.99E+00	24,12/03/08	(616063, 6210808,	0.0)
20	4.92E+00	24,27/10/08	(616063, 6210808,	0.0)
21	4.89E+00	24,10/11/08	(616063, 6210808,	0.0)
22	4.77E+00	24,04/09/08	(613977, 6211372,	0.0)
23	4.66E+00	24,02/02/08	(616063, 6210808,	0.0)
24	4.40E+00	24,27/02/08	(616063, 6210808,	0.0)
25	4.10E+00	24,20/02/08	(616063, 6210808,	0.0)
26	3.95E+00	24,03/06/08	(616063, 6210808,	0.0)
27	3.70E+00	24,07/12/08	(616063, 6210808,	0.0)
28	3.65E+00	24,07/09/08	(616063, 6210808,	0.0)
29	3.56E+00	24,15/02/08	(616063, 6210808,	0.0)
30	3.53E+00	24,31/01/08	(616063, 6210808,	0.0)
31	3.46E+00	24,14/10/08	(616063, 6210808,	0.0)
32	3.38E+00	24,08/01/08	(616063, 6210808,	0.0)
33	3.38E+00	24,12/02/08	(616063, 6210808,	0.0)
34	3.38E+00	24,09/05/08	(613977, 6211372,	0.0)
35	3.34E+00	24,25/12/08	(614615, 6210260,	0.0)
36	3.27E+00	24,08/05/08	(614615, 6210260,	0.0)
37	3.27E+00	24,04/03/08	(613277, 6208896,	0.0)
38	3.23E+00	24,21/04/08	(614615, 6210260,	0.0)
39	3.22E+00	24,29/09/08	(613277, 6208896,	0.0)
40	3.20E+00	24,20/04/08	(613277, 6208896,	0.0)
41	3.20E+00	24,09/01/08	(616063, 6210808,	0.0)
42	3.13E+00	24,08/09/08	(614615, 6210260,	0.0)
43	3.12E+00	24,17/01/08	(616063, 6210808,	0.0)
44	3.11E+00	24,06/11/08	(614615, 6210260,	0.0)
45	3.02E+00	24,13/02/08	(613977, 6211372,	0.0)
46	2.97E+00	24,04/10/08	(614615, 6210260,	0.0)
47	2.95E+00	24,21/02/08	(616063, 6210808,	0.0)
48	2.94E+00	24,14/04/08	(616063, 6210808,	0.0)
49	2.93E+00	24,05/02/08	(616063, 6210808,	0.0)
50	2.85E+00	24,14/06/08	(614615, 6210260,	0.0)
51	2.84E+00	24,15/03/08	(616063, 6210808,	0.0)
52	2.79E+00	24,16/12/08	(614615, 6210260,	0.0)
53	2.76E+00	24,01/02/08	(616063, 6210808,	0.0)
54	2.74E+00	24,03/01/08	(616063, 6210808,	0.0)
55	2.74E+00	24,15/11/08	(616063, 6210808,	0.0)
56	2.70E+00	24,23/08/08	(616063, 6210808,	0.0)
57	2.62E+00	24,02/01/08	(616063, 6210808,	0.0)
58	2.62E+00	24,16/01/08	(616063, 6210808,	0.0)
59	2.61E+00	24,17/11/08	(616063, 6210808,	0.0)
60	2.60E+00	24,13/01/08	(616063, 6210808,	0.0)
61	2.57E+00	24,07/01/08	(616063, 6210808,	0.0)
62	2.42E+00	24,05/06/08	(616063, 6210808,	0.0)
63	2.42E+00	24,06/03/08	(614615, 6210260,	0.0)
64	2.41E+00	24,09/02/08	(616063, 6210808,	0.0)
65	2.40E+00	24,19/10/08	(616063, 6210808,	0.0)
66	2.40E+00	24,21/03/08	(613977, 6211372,	0.0)



APPENDIX B Dispersion Modelling

67	2.38E+00	24,24/01/08	(616063, 6210808,	0.0)
68	2.35E+00	24,26/02/08	(616063, 6210808,	0.0)
69	2.30E+00	24,25/11/08	(613277, 6208896,	0.0)
70	2.29E+00	24,11/11/08	(616063, 6210808,	0.0)
71	2.24E+00	24,07/06/08	(614615, 6210260,	0.0)
72	2.23E+00	24,20/12/08	(613277, 6208896,	0.0)
73	2.21E+00	24,29/02/08	(614615, 6210260,	0.0)
74	2.20E+00	24,08/06/08	(613277, 6208896,	0.0)
75	2.13E+00	24,23/11/08	(614615, 6210260,	0.0)
76	2.08E+00	24,23/03/08	(613977, 6211372,	0.0)
77	2.02E+00	24,31/05/08	(613277, 6208896,	0.0)
78	1.96E+00	24,21/05/08	(614615, 6210260,	0.0)
79	1.90E+00	24,06/06/08	(616063, 6210808,	0.0)
80	1.90E+00	24,22/01/08	(616063, 6210808,	0.0)
81	1.89E+00	24,18/11/08	(616063, 6210808,	0.0)
82	1.88E+00	24,06/09/08	(616063, 6210808,	0.0)
83	1.87E+00	24,17/04/08	(614615, 6210260,	0.0)
84	1.87E+00	24,19/12/08	(614615, 6210260,	0.0)
85	1.86E+00	24,09/12/08	(616063, 6210808,	0.0)
86	1.82E+00	24,27/01/08	(616063, 6210808,	0.0)
87	1.81E+00	24,06/02/08	(616063, 6210808,	0.0)
88	1.81E+00	24,02/09/08	(616063, 6210808,	0.0)
89	1.77E+00	24,20/03/08	(616063, 6210808,	0.0)
90	1.74E+00	24,28/02/08	(616063, 6210808,	0.0)
91	1.74E+00	24,28/10/08	(613977, 6211372,	0.0)
92	1.73E+00	24,17/12/08	(614615, 6210260,	0.0)
93	1.68E+00	24,13/06/08	(616063, 6210808,	0.0)
94	1.68E+00	24,03/11/08	(616063, 6210808,	0.0)
95	1.66E+00	24,16/10/08	(613277, 6208896,	0.0)
96	1.66E+00	24,03/03/08	(613277, 6208896,	0.0)
97	1.65E+00	24,22/07/08	(613277, 6208896,	0.0)
98	1.65E+00	24,10/12/08	(616063, 6210808,	0.0)
99	1.64E+00	24,08/12/08	(613977, 6211372,	0.0)
100	1.58E+00	24,15/01/08	(613977, 6211372,	0.0)

1 Peak values for the 100 worst cases (in microgram/m3)

Averaging time = 24 hours; Source group No. 3

Rank	Value	Time Recorded	Coordinates	
		hour,date	(* denotes polar)	
1	1.86E+01	24,05/09/08	(616063, 6210808,	0.0)
2	1.30E+01	24,10/05/08	(613977, 6211372,	0.0)
3	1.21E+01	24,29/01/08	(616063, 6210808,	0.0)
4	1.12E+01	24,30/05/08	(614615, 6210260,	0.0)
5	1.09E+01	24,07/02/08	(616063, 6210808,	0.0)
6	9.99E+00	24,26/08/08	(616063, 6210808,	0.0)
7	8.71E+00	24,24/02/08	(616063, 6210808,	0.0)



APPENDIX B Dispersion Modelling

8	8.66E+00	24,27/08/08	(614615, 6210260, 0.0)
9	8.66E+00	24,11/03/08	(616063, 6210808, 0.0)
10	8.37E+00	24,30/01/08	(616063, 6210808, 0.0)
11	8.31E+00	24,22/03/08	(616063, 6210808, 0.0)
12	8.01E+00	24,27/10/08	(616063, 6210808, 0.0)
13	7.86E+00	24,21/07/08	(616063, 6210808, 0.0)
14	7.33E+00	24,14/01/08	(616063, 6210808, 0.0)
15	7.26E+00	24,16/02/08	(616063, 6210808, 0.0)
16	7.15E+00	24,27/03/08	(616063, 6210808, 0.0)
17	6.94E+00	24,25/02/08	(616063, 6210808, 0.0)
18	6.68E+00	24,04/09/08	(613977, 6211372, 0.0)
19	6.63E+00	24,12/03/08	(616063, 6210808, 0.0)
20	6.40E+00	24,04/06/08	(616063, 6210808, 0.0)
21	6.35E+00	24,27/02/08	(616063, 6210808, 0.0)
22	6.20E+00	24,02/02/08	(616063, 6210808, 0.0)
23	6.07E+00	24,15/10/08	(616063, 6210808, 0.0)
24	5.99E+00	24,03/01/08	(616063, 6210808, 0.0)
25	5.49E+00	24,10/11/08	(616063, 6210808, 0.0)
26	4.93E+00	24,08/09/08	(614615, 6210260, 0.0)
27	4.91E+00	24,25/12/08	(614615, 6210260, 0.0)
28	4.91E+00	24,07/09/08	(616063, 6210808, 0.0)
29	4.91E+00	24,20/02/08	(616063, 6210808, 0.0)
30	4.82E+00	24,15/11/08	(616063, 6210808, 0.0)
31	4.79E+00	24,14/10/08	(616063, 6210808, 0.0)
32	4.73E+00	24,20/04/08	(613277, 6208896, 0.0)
33	4.70E+00	24,09/05/08	(613977, 6211372, 0.0)
34	4.70E+00	24,21/04/08	(614615, 6210260, 0.0)
35	4.67E+00	24,19/10/08	(616063, 6210808, 0.0)
36	4.64E+00	24,04/03/08	(613277, 6208896, 0.0)
37	4.60E+00	24,08/05/08	(614615, 6210260, 0.0)
38	4.52E+00	24,13/02/08	(613977, 6211372, 0.0)
39	4.49E+00	24,07/12/08	(616063, 6210808, 0.0)
40	4.42E+00	24,08/01/08	(616063, 6210808, 0.0)
41	4.41E+00	24,03/06/08	(616063, 6210808, 0.0)
42	4.34E+00	24,09/01/08	(616063, 6210808, 0.0)
43	4.30E+00	24,15/03/08	(616063, 6210808, 0.0)
44	4.27E+00	24,04/10/08	(614615, 6210260, 0.0)
45	4.25E+00	24,06/11/08	(614615, 6210260, 0.0)
46	4.24E+00	24,16/12/08	(614615, 6210260, 0.0)
47	4.22E+00	24,07/01/08	(616063, 6210808, 0.0)
48	4.19E+00	24,14/06/08	(614615, 6210260, 0.0)
49	4.14E+00	24,15/02/08	(616063, 6210808, 0.0)
50	4.11E+00	24,29/09/08	(613277, 6208896, 0.0)
51	4.09E+00	24,24/01/08	(616063, 6210808, 0.0)
52	4.09E+00	24,27/01/08	(616063, 6210808, 0.0)
53	4.03E+00	24,16/01/08	(616063, 6210808, 0.0)
54	4.02E+00	24,31/01/08	(616063, 6210808, 0.0)
55	4.01E+00	24,12/02/08	(616063, 6210808, 0.0)
56	3.89E+00	24,26/02/08	(616063, 6210808, 0.0)
57	3.78E+00	24,21/02/08	(616063, 6210808, 0.0)
58	3.74E+00	24,06/02/08	(616063, 6210808, 0.0)
59	3.73E+00	24,29/02/08	(614615, 6210260, 0.0)
60	3.67E+00	24,07/06/08	(614615, 6210260, 0.0)
61	3.61E+00	24,23/08/08	(616063, 6210808, 0.0)



APPENDIX B Dispersion Modelling

62	3.60E+00	24,21/03/08	(613977, 6211372,	0.0)
63	3.56E+00	24,17/01/08	(616063, 6210808,	0.0)
64	3.49E+00	24,08/06/08	(613277, 6208896,	0.0)
65	3.46E+00	24,13/08/08	(616063, 6210808,	0.0)
66	3.44E+00	24,23/11/08	(614615, 6210260,	0.0)
67	3.39E+00	24,13/01/08	(616063, 6210808,	0.0)
68	3.37E+00	24,25/11/08	(613277, 6208896,	0.0)
69	3.36E+00	24,11/11/08	(616063, 6210808,	0.0)
70	3.36E+00	24,20/12/08	(613277, 6208896,	0.0)
71	3.32E+00	24,14/04/08	(616063, 6210808,	0.0)
72	3.30E+00	24,01/02/08	(616063, 6210808,	0.0)
73	3.26E+00	24,09/12/08	(616063, 6210808,	0.0)
74	3.22E+00	24,06/03/08	(614615, 6210260,	0.0)
75	3.19E+00	24,02/01/08	(616063, 6210808,	0.0)
76	3.14E+00	24,24/12/08	(616063, 6210808,	0.0)
77	3.12E+00	24,23/03/08	(613977, 6211372,	0.0)
78	3.12E+00	24,05/02/08	(616063, 6210808,	0.0)
79	3.11E+00	24,03/11/08	(616063, 6210808,	0.0)
80	3.05E+00	24,17/11/08	(616063, 6210808,	0.0)
81	2.95E+00	24,28/01/08	(616063, 6210808,	0.0)
82	2.88E+00	24,21/05/08	(614615, 6210260,	0.0)
83	2.87E+00	24,19/12/08	(614615, 6210260,	0.0)
84	2.86E+00	24,21/10/08	(614615, 6210260,	0.0)
85	2.86E+00	24,17/04/08	(614615, 6210260,	0.0)
86	2.80E+00	24,06/01/08	(616063, 6210808,	0.0)
87	2.79E+00	24,31/05/08	(613277, 6208896,	0.0)
88	2.75E+00	24,09/02/08	(616063, 6210808,	0.0)
89	2.74E+00	24,17/12/08	(614615, 6210260,	0.0)
90	2.68E+00	24,15/01/08	(613977, 6211372,	0.0)
91	2.61E+00	24,03/03/08	(613277, 6208896,	0.0)
92	2.59E+00	24,08/12/08	(614615, 6210260,	0.0)
93	2.59E+00	24,05/06/08	(616063, 6210808,	0.0)
94	2.57E+00	24,20/03/08	(616063, 6210808,	0.0)
95	2.55E+00	24,02/09/08	(616063, 6210808,	0.0)
96	2.52E+00	24,16/10/08	(613277, 6208896,	0.0)
97	2.50E+00	24,28/10/08	(613977, 6211372,	0.0)
98	2.45E+00	24,06/09/08	(616063, 6210808,	0.0)
99	2.43E+00	24,25/01/08	(616063, 6210808,	0.0)
100	2.39E+00	24,22/07/08	(613277, 6208896,	0.0)

1.2 PM_{2.5}

1.2.1 Gridded Receptors

1

Port Spencer - PM2.5

Concentration or deposition	Concentration
Emission rate units	kg/hour
Concentration units	microgram/m3
Units conversion factor	2.78E+05
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None



APPENDIX B Dispersion Modelling

Ignore building wake effects? No
 Decay coefficient (unless overridden by met. file) 0.000
 Anemometer height 10 m
 Roughness height at the wind vane site 0.300 m
 Use the convective PDF algorithm? No
 Averaging time for sigma-theta values 60 min.

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high Sigma-theta
 Vertical dispersion curves for sources <100m high Pasquill-Gifford
 Horizontal dispersion curves for sources >100m high Briggs Rural
 Vertical dispersion curves for sources >100m high Briggs Rural
 Enhance horizontal plume spreads for buoyancy? Yes
 Enhance vertical plume spreads for buoyancy? Yes
 Adjust horizontal P-G formulae for roughness height? Yes
 Adjust vertical P-G formulae for roughness height? Yes
 Roughness height 0.100m
 Adjustment for wind directional shear None

PLUME RISE OPTIONS

Gradual plume rise? Yes
 Stack-tip downwash included? Yes
 Building downwash algorithm: PRIME method.
 Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
 Partial penetration of elevated inversions? No
 Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients given by the hourly met. file, a value from the following table (in K/m) is used:

Wind Speed Category	Stability Class					
	A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES

Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES

24 hours
 average over all hours

Port Spencer - PM2.5

SOURCE GROUPS

Group No. Members

1	HEMA-R HEMA-S GENRTR TP-H1 TP-H2 TP-H3 TP-H4 HEMARV HEMSHP
2	GRAI-R GENRTR TP-G1 TP-G2 TP-G3 TP-G4 GRAIRV GRASHP
3	HEMA-R HEMA-S GRAI-R GENRTR TP-H1 TP-H2 TP-H3 TP-H4 TP-G1 TP-G2 TP-G3 TP-G4 HEMARV GRAIRV HEMSHP GRASHP



APPENDIX B Dispersion Modelling

1

Port Spencer - PM2.5

SOURCE CHARACTERISTICS

STACK SOURCE: HEMA-R

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616265 6209823 9m 0m 1.06m 25C 16.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Emission rates by hour of day in kg/hour:

1 0.00E+00	2 0.00E+00	3 0.00E+00	4 0.00E+00
5 0.00E+00	6 0.00E+00	7 5.04E-01	8 5.04E-01
9 5.04E-01	10 5.04E-01	11 5.04E-01	12 5.04E-01
13 5.04E-01	14 5.04E-01	15 5.04E-01	16 5.04E-01
17 5.04E-01	18 5.04E-01	19 5.04E-01	20 5.04E-01
21 5.04E-01	22 5.04E-01	23 0.00E+00	24 0.00E+00

No gravitational settling or scavenging.

STACK SOURCE: HEMA-S

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616187 6209589 13m 23m 1.67m 25C 16.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	140	164	184	198	205	207	203	202	206	205	196	183
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	205	197	182	163	139	110	78	79	111	140	164	184
Along-flow distance from stack	-10	-15	-19	-23	-25	-28	-29	-47	-80	-111	-139	-162
Across-flow distance from stack	41	56	70	82	91	97	100	101	98	92	84	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	140	164	184	198	205	207
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	198	206	207	203	202	206	205	196	182	163	139	110
Along-flow distance from stack	-180	-193	-200	-202	-202	-201	-195	-182	-164	-141	-113	-83
Across-flow distance from stack	59	44	28	10	-7	-25	-41	-56	-70	-81	-91	-97

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
----------------	------	------	------	------	------	------	------	------	------	------	------	------



APPENDIX B Dispersion Modelling

Effective building width 203 202 206 204 197 183 163 139 110 78 79 111
 Effective building height 14 14 14 14 14 14 14 14 14 14 14 14
 Along-flow building length 78 79 111 140 164 184 198 206 208 203 202 206
 Along-flow distance from stack -49 -32 -31 -29 -26 -22 -17 -13 -7 -1 0 -5
 Across-flow distance from stack -100 -101 -98 -92 -84 -72 -59 -44 -27 -10 7 25

(Constant) emission rate = 1.26E+00 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: GRAI-R

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616403 6209775 14m 0m 1.11m 25C 16.0m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 188 179 165 146 122 95 64 67 97 125 148 167
 Effective building height 14 14 14 14 14 14 14 14 14 14 14 14
 Along-flow building length 125 148 167 181 190 192 189 188 191 188 179 165
 Along-flow distance from stack -22 -17 -12 -7 -1 5 10 12 8 4 0 -5
 Across-flow distance from stack -98 -89 -78 -64 -49 -32 -14 5 24 41 58 72

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 181 190 192 0 0 0 188 179 165 146 122 95
 Effective building height 14 14 14 0 0 0 14 14 14 14 14 14
 Along-flow building length 146 122 95 0 0 0 125 148 167 181 190 192
 Along-flow distance from stack -9 -13 -16 0 0 0 -104 -132 -156 -175 -189 -197
 Across-flow distance from stack 84 94 101 0 0 0 98 89 78 64 49 31

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 65 67 97 125 148 167 181 190 192 0 0 0
 Effective building height 14 14 14 14 14 14 14 14 14 0 0 0
 Along-flow building length 189 188 191 188 179 165 146 122 95 0 0 0
 Along-flow distance from stack -200 -200 -199 -192 -179 -160 -137 -110 -79 0 0 0
 Across-flow distance from stack 13 -6 -24 -41 -57 -72 -85 -94 -101 0 0 0

Emission rates by hour of day in kg/hour:
 1 0.00E+00 2 0.00E+00 3 0.00E+00 4 0.00E+00
 5 0.00E+00 6 0.00E+00 7 5.58E-01 8 5.58E-01
 9 5.58E-01 10 5.58E-01 11 5.58E-01 12 5.58E-01
 13 5.58E-01 14 5.58E-01 15 5.58E-01 16 5.58E-01
 17 5.58E-01 18 5.58E-01 19 5.58E-01 20 5.58E-01
 21 5.58E-01 22 5.58E-01 23 0.00E+00 24 0.00E+00

No gravitational settling or scavenging.

STACK SOURCE: GENRTR

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616127 6209440 15m 5m 1.10m 300C 30.0m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0



APPENDIX B Dispersion Modelling

Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 2.22E-01 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616223 6209554 15m 3m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	196	183
Effective building height	0	0	0	0	0	0	0	0	0	0	14	14
Along-flow building length	0	0	0	0	0	0	0	0	0	0	164	184
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	-184	-210
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	104	85

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	198	206	207	203	202	206	0	0	0	0	0	0
Along-flow distance from stack	-230	-243	-249	-247	-243	-236	0	0	0	0	0	0
Across-flow distance from stack	63	39	14	-12	-37	-61	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	197	183	0	0	0	0	0	0
Effective building height	0	0	0	0	14	14	0	0	0	0	0	0
Along-flow building length	0	0	0	0	164	184	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	20	27	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	-104	-85	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616666 6209673 14m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.



APPENDIX B Dispersion Modelling

STACK SOURCE: TP-H3

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617308 6209513 0m 5m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617298 6209466 0m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616624 6209832 15m 3m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	165	146	122	95	64	67	97	125	148	167
Effective building height	0	0	14	14	14	14	14	14	14	14	14	14



APPENDIX B Dispersion Modelling

Along-flow building length 0 0 167 181 190 192 189 188 191 188 179 165
 Along-flow distance from stack 0 0 -172 -192 -207 -215 -217 -216 -213 -204 -189 -167
 Across-flow distance from stack 0 0 85 68 50 30 9 -13 -34 -54 -72 -88

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 165 146 122 95
 Effective building height 0 0 0 0 0 0 0 0 14 14 14 14
 Along-flow building length 0 0 0 0 0 0 0 0 167 181 190 192
 Along-flow distance from stack 0 0 0 0 0 0 0 0 5 11 17 23
 Across-flow distance from stack 0 0 0 0 0 0 0 0 -85 -69 -50 -30

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 65 67 97 125 148 167 0 0 0 0 0 0
 Effective building height 14 14 14 14 14 14 0 0 0 0 0 0
 Along-flow building length 189 188 191 188 179 165 0 0 0 0 0 0
 Along-flow distance from stack 28 27 22 16 9 3 0 0 0 0 0 0
 Across-flow distance from stack -9 13 34 53 72 88 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616666 6209673 14m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G3

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617308 6209513 0m 5m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0



APPENDIX B Dispersion Modelling

Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617249 6209280 0m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

VOLUME SOURCE: HEMARV

X(m) Y(m) Ground Elevation Height Hor. spread Vert. spread
 616265 6209823 9m 5m 1m 3m

Emission rates by hour of day in kg/hour:
 1 0.00E+00 2 0.00E+00 3 0.00E+00 4 0.00E+00
 5 0.00E+00 6 0.00E+00 7 3.00E-02 8 3.00E-02
 9 3.00E-02 10 3.00E-02 11 3.00E-02 12 3.00E-02
 13 3.00E-02 14 3.00E-02 15 3.00E-02 16 3.00E-02
 17 3.00E-02 18 3.00E-02 19 3.00E-02 20 3.00E-02
 21 3.00E-02 22 3.00E-02 23 0.00E+00 24 0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: GRAIRV

X(m) Y(m) Ground Elevation Height Hor. spread Vert. spread
 616403 6209775 13m 5m 1m 3m

Emission rates by hour of day in kg/hour:
 1 0.00E+00 2 0.00E+00 3 0.00E+00 4 0.00E+00
 5 0.00E+00 6 0.00E+00 7 4.50E-01 8 4.50E-01
 9 4.50E-01 10 4.50E-01 11 4.50E-01 12 4.50E-01
 13 4.50E-01 14 4.50E-01 15 4.50E-01 16 4.50E-01
 17 4.50E-01 18 4.50E-01 19 4.50E-01 20 4.50E-01



APPENDIX B
Dispersion Modelling

21 4.50E-01 22 4.50E-01 23 0.00E+00 24 0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: HEMSHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617371	6209484	0m	12m	8m	6m

(Constant) emission rate = 2.00E-02 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: GRASHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617317	6209239	0m	12m	8m	6m

(Constant) emission rate = 2.20E-01 kg/hour
No gravitational settling or scavenging.

1

Port Spencer - PM2.5

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):

612375.m 612425.m 612475.m 612525.m 612575.m 612625.m 612675.m
612725.m 612775.m 612825.m 612875.m 612925.m 612975.m 613025.m
613075.m 613125.m 613175.m 613225.m 613275.m 613325.m 613375.m
613425.m 613475.m 613525.m 613575.m 613625.m 613675.m 613725.m
613775.m 613825.m 613875.m 613925.m 613975.m 614025.m 614075.m
614125.m 614175.m 614225.m 614275.m 614325.m 614375.m 614425.m
614475.m 614525.m 614575.m 614625.m 614675.m 614725.m 614775.m
614825.m 614875.m 614925.m 614975.m 615025.m 615075.m 615125.m
615175.m 615225.m 615275.m 615325.m 615375.m 615425.m 615475.m
615525.m 615575.m 615625.m 615675.m 615725.m 615775.m 615825.m
615875.m 615925.m 615975.m 616025.m 616075.m 616125.m 616175.m
616225.m 616275.m 616325.m 616375.m 616425.m 616475.m 616525.m
616575.m 616625.m 616675.m 616725.m 616775.m 616825.m 616875.m
616925.m 616975.m 617025.m 617075.m 617125.m 617175.m 617225.m
617275.m 617325.m 617375.m

and these y-values (or northings):

6207375.m 6207425.m 6207475.m 6207525.m 6207575.m 6207625.m 6207675.m
6207725.m 6207775.m 6207825.m 6207875.m 6207925.m 6207975.m 6208025.m
6208075.m 6208125.m 6208175.m 6208225.m 6208275.m 6208325.m 6208375.m
6208425.m 6208475.m 6208525.m 6208575.m 6208625.m 6208675.m 6208725.m
6208775.m 6208825.m 6208875.m 6208925.m 6208975.m 6209025.m 6209075.m
6209125.m 6209175.m 6209225.m 6209275.m 6209325.m 6209375.m 6209425.m
6209475.m 6209525.m 6209575.m 6209625.m 6209675.m 6209725.m 6209775.m
6209825.m 6209875.m 6209925.m 6209975.m 6210025.m 6210075.m 6210125.m
6210175.m 6210225.m 6210275.m 6210325.m 6210375.m 6210425.m 6210475.m
6210525.m 6210575.m 6210625.m 6210675.m 6210725.m 6210775.m 6210825.m
6210875.m 6210925.m 6210975.m 6211025.m 6211075.m 6211125.m 6211175.m
6211225.m 6211275.m 6211325.m 6211375.m 6211425.m 6211475.m 6211525.m
6211575.m 6211625.m 6211675.m 6211725.m 6211775.m 6211825.m 6211875.m
6211925.m 6211975.m 6212025.m 6212075.m 6212125.m 6212175.m 6212225.m
6212275.m 6212325.m 6212375.m

METEOROLOGICAL DATA : AUSPLUME METFILE



APPENDIX B Dispersion Modelling

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 1
in microgram/m3

X (km): 612.375 612.425 612.475 612.525 612.575 612.625

Y (km)

6212.375	5.71E-02	5.75E-02	5.75E-02	5.80E-02	5.82E-02	5.83E-02
6212.325	5.72E-02	5.78E-02	5.86E-02	5.85E-02	5.91E-02	5.94E-02
6212.275	5.78E-02	5.84E-02	5.88E-02	5.97E-02	6.00E-02	6.01E-02
6212.225	5.76E-02	5.84E-02	5.94E-02	5.98E-02	6.09E-02	6.13E-02
6212.175	5.77E-02	5.86E-02	5.92E-02	6.03E-02	6.10E-02	6.15E-02
6212.125	5.72E-02	5.81E-02	5.94E-02	6.03E-02	6.13E-02	6.20E-02
6212.075	5.64E-02	5.79E-02	5.88E-02	6.01E-02	6.11E-02	6.19E-02
6212.025	5.58E-02	5.69E-02	5.84E-02	5.96E-02	6.06E-02	6.19E-02
6211.975	5.51E-02	5.66E-02	5.77E-02	5.88E-02	6.04E-02	6.16E-02
6211.925	5.48E-02	5.59E-02	5.72E-02	5.84E-02	5.95E-02	6.12E-02
6211.875	5.43E-02	5.57E-02	5.67E-02	5.78E-02	5.92E-02	6.05E-02
6211.825	5.41E-02	5.52E-02	5.61E-02	5.75E-02	5.87E-02	6.01E-02
6211.775	5.36E-02	5.48E-02	5.59E-02	5.71E-02	5.84E-02	5.96E-02
6211.725	5.32E-02	5.43E-02	5.53E-02	5.67E-02	5.79E-02	5.90E-02
6211.675	5.27E-02	5.36E-02	5.49E-02	5.61E-02	5.72E-02	5.87E-02
6211.625	5.23E-02	5.33E-02	5.44E-02	5.56E-02	5.69E-02	5.81E-02
6211.575	5.20E-02	5.29E-02	5.41E-02	5.52E-02	5.63E-02	5.74E-02
6211.525	5.14E-02	5.26E-02	5.36E-02	5.46E-02	5.59E-02	5.68E-02
6211.475	5.12E-02	5.22E-02	5.32E-02	5.43E-02	5.53E-02	5.62E-02
6211.425	5.07E-02	5.19E-02	5.29E-02	5.38E-02	5.48E-02	5.60E-02
6211.375	5.03E-02	5.12E-02	5.24E-02	5.33E-02	5.43E-02	5.53E-02
6211.325	4.95E-02	5.05E-02	5.18E-02	5.27E-02	5.37E-02	5.47E-02
6211.275	4.88E-02	4.99E-02	5.09E-02	5.19E-02	5.30E-02	5.42E-02
6211.225	4.83E-02	4.93E-02	5.03E-02	5.13E-02	5.24E-02	5.35E-02
6211.175	4.79E-02	4.89E-02	5.00E-02	5.09E-02	5.19E-02	5.29E-02
6211.125	4.78E-02	4.89E-02	4.96E-02	5.06E-02	5.16E-02	5.26E-02
6211.075	4.79E-02	4.87E-02	4.95E-02	5.06E-02	5.15E-02	5.22E-02
6211.025	4.79E-02	4.87E-02	4.97E-02	5.04E-02	5.12E-02	5.20E-02
6210.975	4.80E-02	4.90E-02	4.97E-02	5.04E-02	5.12E-02	5.20E-02
6210.925	4.83E-02	4.90E-02	4.97E-02	5.05E-02	5.13E-02	5.18E-02
6210.875	4.86E-02	4.92E-02	5.01E-02	5.07E-02	5.12E-02	5.19E-02
6210.825	4.88E-02	4.96E-02	5.03E-02	5.09E-02	5.17E-02	5.25E-02
6210.775	4.91E-02	4.98E-02	5.05E-02	5.12E-02	5.22E-02	5.31E-02
6210.725	4.92E-02	5.00E-02	5.07E-02	5.16E-02	5.25E-02	5.35E-02
6210.675	4.95E-02	5.03E-02	5.11E-02	5.18E-02	5.27E-02	5.37E-02
6210.625	5.00E-02	5.07E-02	5.15E-02	5.22E-02	5.30E-02	5.41E-02
6210.575	5.08E-02	5.14E-02	5.21E-02	5.29E-02	5.36E-02	5.45E-02
6210.525	5.16E-02	5.23E-02	5.30E-02	5.37E-02	5.44E-02	5.52E-02
6210.475	5.26E-02	5.34E-02	5.40E-02	5.47E-02	5.53E-02	5.61E-02
6210.425	5.36E-02	5.43E-02	5.49E-02	5.57E-02	5.64E-02	5.74E-02
6210.375	5.44E-02	5.51E-02	5.58E-02	5.65E-02	5.76E-02	5.85E-02
6210.325	5.53E-02	5.60E-02	5.68E-02	5.75E-02	5.84E-02	5.93E-02
6210.275	5.61E-02	5.69E-02	5.76E-02	5.84E-02	5.92E-02	6.00E-02
6210.225	5.67E-02	5.75E-02	5.81E-02	5.89E-02	5.98E-02	6.08E-02
6210.175	5.71E-02	5.79E-02	5.87E-02	5.95E-02	6.05E-02	6.13E-02
6210.125	5.77E-02	5.84E-02	5.94E-02	6.02E-02	6.10E-02	6.19E-02
6210.075	5.83E-02	5.91E-02	5.99E-02	6.07E-02	6.16E-02	6.25E-02
6210.025	5.88E-02	5.96E-02	6.05E-02	6.13E-02	6.22E-02	6.30E-02
6209.975	5.91E-02	6.00E-02	6.09E-02	6.18E-02	6.28E-02	6.37E-02
6209.925	5.93E-02	6.02E-02	6.13E-02	6.22E-02	6.32E-02	6.41E-02
6209.875	5.96E-02	6.04E-02	6.13E-02	6.22E-02	6.32E-02	6.42E-02
6209.825	5.98E-02	6.06E-02	6.15E-02	6.24E-02	6.34E-02	6.44E-02
6209.775	5.99E-02	6.08E-02	6.17E-02	6.26E-02	6.35E-02	6.45E-02
6209.725	6.00E-02	6.09E-02	6.17E-02	6.26E-02	6.36E-02	6.47E-02
6209.675	5.98E-02	6.07E-02	6.16E-02	6.25E-02	6.34E-02	6.44E-02
6209.625	5.92E-02	6.00E-02	6.09E-02	6.18E-02	6.26E-02	6.36E-02
6209.575	5.82E-02	5.91E-02	5.99E-02	6.07E-02	6.16E-02	6.24E-02
6209.525	5.70E-02	5.78E-02	5.86E-02	5.93E-02	6.02E-02	6.10E-02
6209.475	5.58E-02	5.66E-02	5.74E-02	5.82E-02	5.89E-02	5.97E-02
6209.425	5.46E-02	5.54E-02	5.62E-02	5.69E-02	5.76E-02	5.83E-02
6209.375	5.34E-02	5.41E-02	5.49E-02	5.57E-02	5.65E-02	5.72E-02
6209.325	5.24E-02	5.30E-02	5.38E-02	5.46E-02	5.55E-02	5.62E-02



APPENDIX B Dispersion Modelling

6209.275 5.17E-02 5.25E-02 5.32E-02 5.40E-02 5.48E-02 5.57E-02
6209.225 5.14E-02 5.21E-02 5.29E-02 5.38E-02 5.45E-02 5.54E-02
6209.175 5.12E-02 5.20E-02 5.28E-02 5.37E-02 5.46E-02 5.55E-02
6209.125 5.12E-02 5.20E-02 5.28E-02 5.38E-02 5.47E-02 5.56E-02
6209.075 5.14E-02 5.22E-02 5.31E-02 5.39E-02 5.48E-02 5.58E-02
6209.025 5.16E-02 5.25E-02 5.34E-02 5.42E-02 5.51E-02 5.61E-02
6208.975 5.19E-02 5.28E-02 5.37E-02 5.46E-02 5.55E-02 5.64E-02
6208.925 5.22E-02 5.31E-02 5.39E-02 5.49E-02 5.58E-02 5.67E-02
6208.875 5.25E-02 5.33E-02 5.41E-02 5.50E-02 5.60E-02 5.70E-02
6208.825 5.26E-02 5.34E-02 5.43E-02 5.51E-02 5.60E-02 5.70E-02
6208.775 5.26E-02 5.34E-02 5.43E-02 5.51E-02 5.60E-02 5.71E-02
6208.725 5.26E-02 5.34E-02 5.43E-02 5.51E-02 5.61E-02 5.71E-02
6208.675 5.26E-02 5.35E-02 5.43E-02 5.52E-02 5.62E-02 5.73E-02
6208.625 5.27E-02 5.36E-02 5.45E-02 5.55E-02 5.65E-02 5.76E-02
6208.575 5.28E-02 5.37E-02 5.48E-02 5.59E-02 5.70E-02 5.80E-02
6208.525 5.31E-02 5.41E-02 5.51E-02 5.64E-02 5.75E-02 5.87E-02
6208.475 5.36E-02 5.47E-02 5.58E-02 5.69E-02 5.83E-02 5.96E-02
6208.425 5.43E-02 5.54E-02 5.67E-02 5.80E-02 5.93E-02 6.07E-02
6208.375 5.52E-02 5.64E-02 5.77E-02 5.90E-02 6.03E-02 6.16E-02
6208.325 5.60E-02 5.73E-02 5.85E-02 5.97E-02 6.09E-02 6.21E-02
6208.275 5.67E-02 5.79E-02 5.91E-02 6.01E-02 6.11E-02 6.21E-02
6208.225 5.72E-02 5.82E-02 5.91E-02 6.00E-02 6.09E-02 6.17E-02
6208.175 5.71E-02 5.80E-02 5.88E-02 5.95E-02 6.02E-02 6.10E-02
6208.125 5.68E-02 5.74E-02 5.81E-02 5.88E-02 5.94E-02 6.02E-02
6208.075 5.62E-02 5.68E-02 5.74E-02 5.81E-02 5.87E-02 5.94E-02
6208.025 5.55E-02 5.61E-02 5.68E-02 5.74E-02 5.80E-02 5.86E-02
6207.975 5.48E-02 5.54E-02 5.61E-02 5.66E-02 5.71E-02 5.77E-02
6207.925 5.41E-02 5.47E-02 5.52E-02 5.57E-02 5.61E-02 5.66E-02
6207.875 5.33E-02 5.38E-02 5.43E-02 5.47E-02 5.51E-02 5.55E-02
6207.825 5.24E-02 5.28E-02 5.32E-02 5.37E-02 5.41E-02 5.46E-02
6207.775 5.15E-02 5.19E-02 5.23E-02 5.28E-02 5.33E-02 5.38E-02
6207.725 5.08E-02 5.12E-02 5.16E-02 5.21E-02 5.26E-02 5.32E-02
6207.675 5.02E-02 5.06E-02 5.11E-02 5.17E-02 5.22E-02 5.29E-02
6207.625 4.97E-02 5.02E-02 5.07E-02 5.13E-02 5.20E-02 5.27E-02
6207.575 4.93E-02 4.99E-02 5.05E-02 5.11E-02 5.18E-02 5.25E-02
6207.525 4.91E-02 4.97E-02 5.03E-02 5.10E-02 5.16E-02 5.22E-02
6207.475 4.89E-02 4.95E-02 5.01E-02 5.07E-02 5.13E-02 5.18E-02
6207.425 4.87E-02 4.93E-02 4.99E-02 5.04E-02 5.08E-02 5.11E-02
6207.375 4.84E-02 4.89E-02 4.94E-02 4.98E-02 5.00E-02 5.02E-02

X (km): 612.675 612.725 612.775 612.825 612.875 612.925

Y (km)

6212.375 5.88E-02 5.88E-02 5.94E-02 5.94E-02 6.02E-02 6.07E-02
6212.325 5.95E-02 6.00E-02 6.01E-02 6.07E-02 6.07E-02 6.11E-02
6212.275 6.07E-02 6.08E-02 6.13E-02 6.14E-02 6.19E-02 6.23E-02
6212.225 6.14E-02 6.20E-02 6.23E-02 6.26E-02 6.29E-02 6.30E-02
6212.175 6.25E-02 6.29E-02 6.32E-02 6.36E-02 6.37E-02 6.43E-02
6212.125 6.25E-02 6.36E-02 6.41E-02 6.45E-02 6.49E-02 6.53E-02
6212.075 6.30E-02 6.38E-02 6.46E-02 6.53E-02 6.58E-02 6.62E-02
6212.025 6.30E-02 6.39E-02 6.48E-02 6.56E-02 6.65E-02 6.72E-02
6211.975 6.28E-02 6.39E-02 6.46E-02 6.59E-02 6.68E-02 6.79E-02
6211.925 6.24E-02 6.34E-02 6.49E-02 6.60E-02 6.71E-02 6.80E-02
6211.875 6.16E-02 6.33E-02 6.46E-02 6.59E-02 6.71E-02 6.85E-02
6211.825 6.13E-02 6.26E-02 6.42E-02 6.55E-02 6.68E-02 6.82E-02
6211.775 6.08E-02 6.21E-02 6.34E-02 6.51E-02 6.64E-02 6.78E-02
6211.725 6.05E-02 6.17E-02 6.30E-02 6.43E-02 6.57E-02 6.73E-02
6211.675 6.00E-02 6.13E-02 6.26E-02 6.39E-02 6.52E-02 6.67E-02
6211.625 5.95E-02 6.08E-02 6.20E-02 6.35E-02 6.48E-02 6.60E-02
6211.575 5.87E-02 6.00E-02 6.14E-02 6.28E-02 6.41E-02 6.56E-02
6211.525 5.80E-02 5.94E-02 6.07E-02 6.21E-02 6.35E-02 6.49E-02
6211.475 5.76E-02 5.86E-02 5.99E-02 6.13E-02 6.27E-02 6.44E-02
6211.425 5.69E-02 5.80E-02 5.95E-02 6.06E-02 6.22E-02 6.34E-02
6211.375 5.63E-02 5.77E-02 5.88E-02 5.99E-02 6.13E-02 6.26E-02
6211.325 5.59E-02 5.69E-02 5.81E-02 5.95E-02 6.06E-02 6.22E-02
6211.275 5.52E-02 5.63E-02 5.76E-02 5.88E-02 6.03E-02 6.16E-02
6211.225 5.45E-02 5.57E-02 5.69E-02 5.82E-02 5.97E-02 6.09E-02
6211.175 5.40E-02 5.49E-02 5.60E-02 5.76E-02 5.89E-02 6.04E-02
6211.125 5.34E-02 5.43E-02 5.56E-02 5.68E-02 5.81E-02 5.98E-02
6211.075 5.31E-02 5.41E-02 5.50E-02 5.62E-02 5.77E-02 5.91E-02



APPENDIX B Dispersion Modelling

6211.025 5.30E-02 5.37E-02 5.45E-02 5.59E-02 5.71E-02 5.84E-02
6210.975 5.26E-02 5.33E-02 5.45E-02 5.56E-02 5.66E-02 5.80E-02
6210.925 5.24E-02 5.33E-02 5.43E-02 5.53E-02 5.64E-02 5.77E-02
6210.875 5.28E-02 5.36E-02 5.45E-02 5.55E-02 5.66E-02 5.77E-02
6210.825 5.33E-02 5.40E-02 5.49E-02 5.61E-02 5.69E-02 5.78E-02
6210.775 5.39E-02 5.46E-02 5.57E-02 5.67E-02 5.75E-02 5.82E-02
6210.725 5.42E-02 5.52E-02 5.63E-02 5.72E-02 5.80E-02 5.90E-02
6210.675 5.47E-02 5.55E-02 5.64E-02 5.73E-02 5.85E-02 5.94E-02
6210.625 5.50E-02 5.59E-02 5.66E-02 5.77E-02 5.87E-02 5.97E-02
6210.575 5.54E-02 5.63E-02 5.73E-02 5.83E-02 5.92E-02 6.00E-02
6210.525 5.59E-02 5.70E-02 5.79E-02 5.88E-02 5.97E-02 6.08E-02
6210.475 5.70E-02 5.79E-02 5.88E-02 5.96E-02 6.05E-02 6.14E-02
6210.425 5.82E-02 5.89E-02 5.97E-02 6.06E-02 6.15E-02 6.24E-02
6210.375 5.93E-02 6.00E-02 6.08E-02 6.18E-02 6.27E-02 6.36E-02
6210.325 6.01E-02 6.09E-02 6.19E-02 6.28E-02 6.37E-02 6.47E-02
6210.275 6.09E-02 6.18E-02 6.27E-02 6.36E-02 6.46E-02 6.56E-02
6210.225 6.17E-02 6.25E-02 6.34E-02 6.44E-02 6.54E-02 6.65E-02
6210.175 6.22E-02 6.31E-02 6.41E-02 6.50E-02 6.61E-02 6.72E-02
6210.125 6.28E-02 6.37E-02 6.46E-02 6.58E-02 6.69E-02 6.78E-02
6210.075 6.34E-02 6.43E-02 6.54E-02 6.64E-02 6.73E-02 6.84E-02
6210.025 6.40E-02 6.51E-02 6.60E-02 6.70E-02 6.81E-02 6.91E-02
6209.975 6.47E-02 6.57E-02 6.67E-02 6.77E-02 6.87E-02 6.98E-02
6209.925 6.52E-02 6.62E-02 6.72E-02 6.83E-02 6.92E-02 7.03E-02
6209.875 6.52E-02 6.63E-02 6.73E-02 6.84E-02 6.94E-02 7.05E-02
6209.825 6.54E-02 6.64E-02 6.75E-02 6.85E-02 6.96E-02 7.09E-02
6209.775 6.56E-02 6.67E-02 6.78E-02 6.89E-02 6.99E-02 7.11E-02
6209.725 6.58E-02 6.69E-02 6.80E-02 6.90E-02 7.01E-02 7.13E-02
6209.675 6.55E-02 6.66E-02 6.77E-02 6.87E-02 6.98E-02 7.10E-02
6209.625 6.46E-02 6.57E-02 6.67E-02 6.78E-02 6.89E-02 7.01E-02
6209.575 6.34E-02 6.45E-02 6.55E-02 6.65E-02 6.76E-02 6.87E-02
6209.525 6.19E-02 6.28E-02 6.38E-02 6.48E-02 6.59E-02 6.70E-02
6209.475 6.04E-02 6.13E-02 6.22E-02 6.33E-02 6.43E-02 6.54E-02
6209.425 5.92E-02 6.00E-02 6.08E-02 6.18E-02 6.30E-02 6.41E-02
6209.375 5.80E-02 5.88E-02 5.96E-02 6.07E-02 6.18E-02 6.30E-02
6209.325 5.71E-02 5.80E-02 5.89E-02 6.00E-02 6.11E-02 6.23E-02
6209.275 5.66E-02 5.75E-02 5.85E-02 5.96E-02 6.08E-02 6.19E-02
6209.225 5.64E-02 5.74E-02 5.84E-02 5.96E-02 6.07E-02 6.19E-02
6209.175 5.64E-02 5.74E-02 5.85E-02 5.97E-02 6.08E-02 6.20E-02
6209.125 5.66E-02 5.77E-02 5.88E-02 5.99E-02 6.10E-02 6.22E-02
6209.075 5.68E-02 5.79E-02 5.90E-02 6.01E-02 6.13E-02 6.26E-02
6209.025 5.71E-02 5.82E-02 5.93E-02 6.04E-02 6.16E-02 6.29E-02
6208.975 5.74E-02 5.84E-02 5.96E-02 6.06E-02 6.18E-02 6.31E-02
6208.925 5.77E-02 5.87E-02 5.97E-02 6.07E-02 6.19E-02 6.31E-02
6208.875 5.79E-02 5.89E-02 5.98E-02 6.07E-02 6.18E-02 6.29E-02
6208.825 5.81E-02 5.90E-02 6.00E-02 6.08E-02 6.18E-02 6.29E-02
6208.775 5.81E-02 5.90E-02 6.00E-02 6.10E-02 6.20E-02 6.32E-02
6208.725 5.81E-02 5.91E-02 6.02E-02 6.12E-02 6.24E-02 6.35E-02
6208.675 5.83E-02 5.93E-02 6.05E-02 6.16E-02 6.29E-02 6.42E-02
6208.625 5.87E-02 5.99E-02 6.11E-02 6.24E-02 6.38E-02 6.52E-02
6208.575 5.92E-02 6.06E-02 6.19E-02 6.33E-02 6.48E-02 6.63E-02
6208.525 6.00E-02 6.15E-02 6.29E-02 6.44E-02 6.60E-02 6.75E-02
6208.475 6.10E-02 6.26E-02 6.40E-02 6.55E-02 6.70E-02 6.84E-02
6208.425 6.21E-02 6.35E-02 6.49E-02 6.63E-02 6.76E-02 6.88E-02
6208.375 6.29E-02 6.41E-02 6.54E-02 6.65E-02 6.76E-02 6.85E-02
6208.325 6.32E-02 6.42E-02 6.52E-02 6.62E-02 6.70E-02 6.78E-02
6208.275 6.30E-02 6.39E-02 6.47E-02 6.55E-02 6.62E-02 6.70E-02
6208.225 6.24E-02 6.32E-02 6.39E-02 6.46E-02 6.54E-02 6.61E-02
6208.175 6.16E-02 6.24E-02 6.31E-02 6.38E-02 6.45E-02 6.52E-02
6208.125 6.09E-02 6.15E-02 6.22E-02 6.29E-02 6.35E-02 6.41E-02
6208.075 6.01E-02 6.07E-02 6.13E-02 6.19E-02 6.24E-02 6.29E-02
6208.025 5.92E-02 5.98E-02 6.03E-02 6.07E-02 6.12E-02 6.16E-02
6207.975 5.82E-02 5.87E-02 5.91E-02 5.96E-02 6.00E-02 6.05E-02
6207.925 5.71E-02 5.75E-02 5.80E-02 5.85E-02 5.90E-02 5.95E-02
6207.875 5.60E-02 5.65E-02 5.70E-02 5.75E-02 5.81E-02 5.88E-02
6207.825 5.51E-02 5.56E-02 5.62E-02 5.69E-02 5.76E-02 5.83E-02
6207.775 5.44E-02 5.50E-02 5.57E-02 5.64E-02 5.72E-02 5.81E-02
6207.725 5.39E-02 5.46E-02 5.53E-02 5.62E-02 5.70E-02 5.78E-02
6207.675 5.36E-02 5.43E-02 5.51E-02 5.59E-02 5.67E-02 5.75E-02
6207.625 5.34E-02 5.41E-02 5.48E-02 5.56E-02 5.62E-02 5.68E-02
6207.575 5.32E-02 5.38E-02 5.45E-02 5.50E-02 5.54E-02 5.58E-02
6207.525 5.28E-02 5.33E-02 5.38E-02 5.41E-02 5.44E-02 5.45E-02



APPENDIX B Dispersion Modelling

6207.475 5.22E-02 5.25E-02 5.28E-02 5.30E-02 5.31E-02 5.31E-02
6207.425 5.14E-02 5.16E-02 5.16E-02 5.17E-02 5.17E-02 5.16E-02
6207.375 5.03E-02 5.04E-02 5.03E-02 5.03E-02 5.02E-02 5.02E-02

X (km): 612.975 613.025 613.075 613.125 613.175 613.225

Y (km)

6212.375	6.11E-02	6.22E-02	6.29E-02	6.42E-02	6.48E-02	6.58E-02
6212.325	6.20E-02	6.24E-02	6.35E-02	6.42E-02	6.55E-02	6.62E-02
6212.275	6.24E-02	6.33E-02	6.37E-02	6.48E-02	6.55E-02	6.68E-02
6212.225	6.36E-02	6.38E-02	6.47E-02	6.51E-02	6.62E-02	6.71E-02
6212.175	6.44E-02	6.50E-02	6.52E-02	6.61E-02	6.68E-02	6.76E-02
6212.125	6.57E-02	6.57E-02	6.65E-02	6.70E-02	6.75E-02	6.83E-02
6212.075	6.67E-02	6.71E-02	6.75E-02	6.80E-02	6.85E-02	6.91E-02
6212.025	6.76E-02	6.81E-02	6.88E-02	6.91E-02	6.95E-02	7.01E-02
6211.975	6.85E-02	6.95E-02	6.96E-02	7.02E-02	7.06E-02	7.08E-02
6211.925	6.94E-02	7.00E-02	7.07E-02	7.11E-02	7.17E-02	7.22E-02
6211.875	6.94E-02	7.03E-02	7.14E-02	7.22E-02	7.31E-02	7.33E-02
6211.825	6.94E-02	7.06E-02	7.17E-02	7.30E-02	7.37E-02	7.47E-02
6211.775	6.92E-02	7.06E-02	7.22E-02	7.30E-02	7.45E-02	7.53E-02
6211.725	6.89E-02	7.06E-02	7.19E-02	7.32E-02	7.45E-02	7.56E-02
6211.675	6.86E-02	7.00E-02	7.15E-02	7.34E-02	7.46E-02	7.63E-02
6211.625	6.77E-02	6.92E-02	7.13E-02	7.27E-02	7.46E-02	7.59E-02
6211.575	6.70E-02	6.89E-02	7.03E-02	7.24E-02	7.39E-02	7.56E-02
6211.525	6.67E-02	6.80E-02	6.97E-02	7.16E-02	7.31E-02	7.53E-02
6211.475	6.58E-02	6.74E-02	6.93E-02	7.08E-02	7.27E-02	7.43E-02
6211.425	6.50E-02	6.68E-02	6.85E-02	7.04E-02	7.22E-02	7.37E-02
6211.375	6.44E-02	6.59E-02	6.76E-02	6.96E-02	7.12E-02	7.33E-02
6211.325	6.36E-02	6.51E-02	6.70E-02	6.86E-02	7.06E-02	7.24E-02
6211.275	6.29E-02	6.46E-02	6.62E-02	6.78E-02	6.98E-02	7.15E-02
6211.225	6.26E-02	6.41E-02	6.56E-02	6.74E-02	6.91E-02	7.11E-02
6211.175	6.20E-02	6.35E-02	6.52E-02	6.68E-02	6.84E-02	7.03E-02
6211.125	6.14E-02	6.28E-02	6.45E-02	6.62E-02	6.80E-02	6.97E-02
6211.075	6.05E-02	6.24E-02	6.40E-02	6.55E-02	6.74E-02	6.92E-02
6211.025	6.01E-02	6.17E-02	6.33E-02	6.51E-02	6.68E-02	6.85E-02
6210.975	5.95E-02	6.11E-02	6.28E-02	6.44E-02	6.60E-02	6.79E-02
6210.925	5.91E-02	6.03E-02	6.20E-02	6.37E-02	6.53E-02	6.71E-02
6210.875	5.86E-02	6.02E-02	6.16E-02	6.32E-02	6.46E-02	6.63E-02
6210.825	5.87E-02	5.99E-02	6.11E-02	6.26E-02	6.42E-02	6.57E-02
6210.775	5.90E-02	6.00E-02	6.12E-02	6.24E-02	6.37E-02	6.52E-02
6210.725	5.97E-02	6.05E-02	6.17E-02	6.27E-02	6.38E-02	6.52E-02
6210.675	6.04E-02	6.13E-02	6.23E-02	6.32E-02	6.42E-02	6.54E-02
6210.625	6.07E-02	6.19E-02	6.29E-02	6.39E-02	6.50E-02	6.60E-02
6210.575	6.13E-02	6.22E-02	6.33E-02	6.44E-02	6.57E-02	6.67E-02
6210.525	6.17E-02	6.27E-02	6.37E-02	6.50E-02	6.61E-02	6.72E-02
6210.475	6.23E-02	6.32E-02	6.42E-02	6.55E-02	6.66E-02	6.77E-02
6210.425	6.33E-02	6.43E-02	6.54E-02	6.64E-02	6.73E-02	6.84E-02
6210.375	6.45E-02	6.55E-02	6.66E-02	6.75E-02	6.85E-02	6.96E-02
6210.325	6.56E-02	6.68E-02	6.78E-02	6.88E-02	6.99E-02	7.10E-02
6210.275	6.68E-02	6.79E-02	6.89E-02	7.00E-02	7.11E-02	7.25E-02
6210.225	6.76E-02	6.87E-02	6.98E-02	7.09E-02	7.21E-02	7.35E-02
6210.175	6.83E-02	6.94E-02	7.05E-02	7.17E-02	7.30E-02	7.43E-02
6210.125	6.88E-02	6.99E-02	7.10E-02	7.22E-02	7.37E-02	7.50E-02
6210.075	6.94E-02	7.05E-02	7.17E-02	7.30E-02	7.43E-02	7.56E-02
6210.025	7.02E-02	7.13E-02	7.25E-02	7.38E-02	7.51E-02	7.64E-02
6209.975	7.09E-02	7.20E-02	7.34E-02	7.46E-02	7.60E-02	7.73E-02
6209.925	7.15E-02	7.28E-02	7.41E-02	7.54E-02	7.67E-02	7.81E-02
6209.875	7.19E-02	7.31E-02	7.44E-02	7.58E-02	7.72E-02	7.87E-02
6209.825	7.20E-02	7.33E-02	7.46E-02	7.60E-02	7.75E-02	7.91E-02
6209.775	7.22E-02	7.35E-02	7.49E-02	7.63E-02	7.78E-02	7.94E-02
6209.725	7.24E-02	7.38E-02	7.53E-02	7.67E-02	7.82E-02	7.98E-02
6209.675	7.22E-02	7.37E-02	7.51E-02	7.65E-02	7.81E-02	7.96E-02
6209.625	7.14E-02	7.27E-02	7.41E-02	7.55E-02	7.69E-02	7.86E-02
6209.575	7.00E-02	7.13E-02	7.26E-02	7.39E-02	7.53E-02	7.68E-02
6209.525	6.82E-02	6.95E-02	7.07E-02	7.20E-02	7.33E-02	7.47E-02
6209.475	6.65E-02	6.78E-02	6.90E-02	7.02E-02	7.14E-02	7.28E-02
6209.425	6.51E-02	6.63E-02	6.75E-02	6.87E-02	7.00E-02	7.13E-02
6209.375	6.42E-02	6.54E-02	6.65E-02	6.77E-02	6.90E-02	7.03E-02
6209.325	6.35E-02	6.48E-02	6.60E-02	6.73E-02	6.84E-02	6.97E-02
6209.275	6.31E-02	6.45E-02	6.57E-02	6.69E-02	6.82E-02	6.96E-02



APPENDIX B Dispersion Modelling

6209.225 6.31E-02 6.44E-02 6.57E-02 6.70E-02 6.82E-02 6.95E-02
6209.175 6.32E-02 6.46E-02 6.58E-02 6.71E-02 6.83E-02 6.96E-02
6209.125 6.36E-02 6.48E-02 6.60E-02 6.73E-02 6.87E-02 6.99E-02
6209.075 6.38E-02 6.50E-02 6.63E-02 6.77E-02 6.90E-02 7.04E-02
6209.025 6.41E-02 6.54E-02 6.66E-02 6.79E-02 6.92E-02 7.06E-02
6208.975 6.43E-02 6.55E-02 6.67E-02 6.80E-02 6.93E-02 7.06E-02
6208.925 6.43E-02 6.54E-02 6.67E-02 6.80E-02 6.92E-02 7.05E-02
6208.875 6.42E-02 6.54E-02 6.66E-02 6.79E-02 6.93E-02 7.07E-02
6208.825 6.43E-02 6.54E-02 6.68E-02 6.82E-02 6.96E-02 7.11E-02
6208.775 6.44E-02 6.57E-02 6.71E-02 6.86E-02 7.02E-02 7.18E-02
6208.725 6.48E-02 6.62E-02 6.77E-02 6.94E-02 7.11E-02 7.29E-02
6208.675 6.56E-02 6.71E-02 6.88E-02 7.05E-02 7.23E-02 7.42E-02
6208.625 6.67E-02 6.83E-02 7.01E-02 7.19E-02 7.37E-02 7.55E-02
6208.575 6.79E-02 6.96E-02 7.13E-02 7.30E-02 7.47E-02 7.64E-02
6208.525 6.91E-02 7.06E-02 7.21E-02 7.37E-02 7.51E-02 7.65E-02
6208.475 6.98E-02 7.11E-02 7.24E-02 7.37E-02 7.48E-02 7.59E-02
6208.425 7.00E-02 7.10E-02 7.20E-02 7.31E-02 7.40E-02 7.50E-02
6208.375 6.95E-02 7.04E-02 7.12E-02 7.21E-02 7.30E-02 7.40E-02
6208.325 6.86E-02 6.95E-02 7.03E-02 7.11E-02 7.21E-02 7.29E-02
6208.275 6.77E-02 6.85E-02 6.93E-02 7.02E-02 7.10E-02 7.18E-02
6208.225 6.68E-02 6.76E-02 6.83E-02 6.91E-02 6.98E-02 7.04E-02
6208.175 6.59E-02 6.65E-02 6.71E-02 6.78E-02 6.83E-02 6.89E-02
6208.125 6.47E-02 6.52E-02 6.58E-02 6.63E-02 6.69E-02 6.75E-02
6208.075 6.34E-02 6.39E-02 6.45E-02 6.50E-02 6.57E-02 6.64E-02
6208.025 6.21E-02 6.27E-02 6.33E-02 6.40E-02 6.47E-02 6.55E-02
6207.975 6.10E-02 6.16E-02 6.24E-02 6.31E-02 6.40E-02 6.50E-02
6207.925 6.02E-02 6.09E-02 6.17E-02 6.26E-02 6.36E-02 6.47E-02
6207.875 5.96E-02 6.04E-02 6.13E-02 6.24E-02 6.34E-02 6.43E-02
6207.825 5.92E-02 6.01E-02 6.11E-02 6.21E-02 6.30E-02 6.38E-02
6207.775 5.90E-02 5.99E-02 6.08E-02 6.16E-02 6.23E-02 6.29E-02
6207.725 5.87E-02 5.95E-02 6.02E-02 6.08E-02 6.13E-02 6.16E-02
6207.675 5.81E-02 5.87E-02 5.92E-02 5.96E-02 5.99E-02 6.00E-02
6207.625 5.73E-02 5.76E-02 5.79E-02 5.81E-02 5.81E-02 5.82E-02
6207.575 5.60E-02 5.63E-02 5.63E-02 5.64E-02 5.64E-02 5.64E-02
6207.525 5.46E-02 5.46E-02 5.47E-02 5.47E-02 5.47E-02 5.48E-02
6207.475 5.31E-02 5.31E-02 5.31E-02 5.32E-02 5.34E-02 5.38E-02
6207.425 5.16E-02 5.16E-02 5.18E-02 5.20E-02 5.25E-02 5.30E-02
6207.375 5.03E-02 5.04E-02 5.08E-02 5.13E-02 5.18E-02 5.26E-02

X (km): 613.275 613.325 613.375 613.425 613.475 613.525

Y (km)

6212.375 6.62E-02 6.71E-02 6.78E-02 6.89E-02 6.99E-02 7.13E-02
6212.325 6.72E-02 6.79E-02 6.86E-02 6.93E-02 7.04E-02 7.15E-02
6212.275 6.78E-02 6.86E-02 6.93E-02 7.01E-02 7.08E-02 7.20E-02
6212.225 6.83E-02 6.92E-02 7.01E-02 7.09E-02 7.16E-02 7.24E-02
6212.175 6.86E-02 6.98E-02 7.07E-02 7.17E-02 7.25E-02 7.33E-02
6212.125 6.92E-02 7.01E-02 7.13E-02 7.23E-02 7.33E-02 7.41E-02
6212.075 6.98E-02 7.07E-02 7.17E-02 7.29E-02 7.40E-02 7.51E-02
6212.025 7.03E-02 7.13E-02 7.19E-02 7.33E-02 7.48E-02 7.57E-02
6211.975 7.16E-02 7.22E-02 7.29E-02 7.38E-02 7.50E-02 7.62E-02
6211.925 7.27E-02 7.32E-02 7.39E-02 7.46E-02 7.56E-02 7.68E-02
6211.875 7.41E-02 7.44E-02 7.50E-02 7.57E-02 7.64E-02 7.74E-02
6211.825 7.50E-02 7.59E-02 7.62E-02 7.71E-02 7.75E-02 7.86E-02
6211.775 7.61E-02 7.67E-02 7.74E-02 7.83E-02 7.89E-02 7.94E-02
6211.725 7.71E-02 7.78E-02 7.90E-02 7.93E-02 8.02E-02 8.06E-02
6211.675 7.72E-02 7.88E-02 7.97E-02 8.09E-02 8.13E-02 8.23E-02
6211.625 7.78E-02 7.91E-02 8.06E-02 8.17E-02 8.29E-02 8.37E-02
6211.575 7.76E-02 7.89E-02 8.08E-02 8.18E-02 8.36E-02 8.45E-02
6211.525 7.69E-02 7.89E-02 8.04E-02 8.24E-02 8.39E-02 8.55E-02
6211.475 7.65E-02 7.85E-02 8.01E-02 8.22E-02 8.41E-02 8.57E-02
6211.425 7.57E-02 7.74E-02 7.98E-02 8.17E-02 8.37E-02 8.56E-02
6211.375 7.52E-02 7.71E-02 7.90E-02 8.13E-02 8.33E-02 8.54E-02
6211.325 7.43E-02 7.66E-02 7.83E-02 8.06E-02 8.25E-02 8.49E-02
6211.275 7.36E-02 7.58E-02 7.80E-02 8.00E-02 8.21E-02 8.42E-02
6211.225 7.30E-02 7.48E-02 7.71E-02 7.92E-02 8.16E-02 8.37E-02
6211.175 7.21E-02 7.43E-02 7.64E-02 7.86E-02 8.08E-02 8.29E-02
6211.125 7.15E-02 7.34E-02 7.54E-02 7.78E-02 7.99E-02 8.23E-02
6211.075 7.10E-02 7.28E-02 7.49E-02 7.68E-02 7.89E-02 8.14E-02
6211.025 7.04E-02 7.22E-02 7.43E-02 7.60E-02 7.83E-02 8.04E-02



APPENDIX B Dispersion Modelling

6210.975 6.97E-02 7.16E-02 7.35E-02 7.54E-02 7.77E-02 7.95E-02
6210.925 6.89E-02 7.11E-02 7.28E-02 7.49E-02 7.70E-02 7.89E-02
6210.875 6.81E-02 7.00E-02 7.19E-02 7.42E-02 7.61E-02 7.83E-02
6210.825 6.75E-02 6.92E-02 7.10E-02 7.32E-02 7.51E-02 7.76E-02
6210.775 6.68E-02 6.85E-02 7.03E-02 7.24E-02 7.42E-02 7.65E-02
6210.725 6.64E-02 6.79E-02 6.98E-02 7.15E-02 7.34E-02 7.56E-02
6210.675 6.66E-02 6.79E-02 6.95E-02 7.09E-02 7.27E-02 7.48E-02
6210.625 6.70E-02 6.84E-02 6.97E-02 7.09E-02 7.26E-02 7.43E-02
6210.575 6.78E-02 6.91E-02 7.02E-02 7.14E-02 7.29E-02 7.43E-02
6210.525 6.84E-02 6.99E-02 7.11E-02 7.22E-02 7.36E-02 7.49E-02
6210.475 6.91E-02 7.04E-02 7.17E-02 7.29E-02 7.46E-02 7.59E-02
6210.425 6.98E-02 7.10E-02 7.24E-02 7.37E-02 7.53E-02 7.67E-02
6210.375 7.09E-02 7.21E-02 7.33E-02 7.47E-02 7.60E-02 7.75E-02
6210.325 7.23E-02 7.34E-02 7.46E-02 7.60E-02 7.73E-02 7.87E-02
6210.275 7.37E-02 7.49E-02 7.61E-02 7.75E-02 7.88E-02 8.02E-02
6210.225 7.48E-02 7.61E-02 7.74E-02 7.89E-02 8.03E-02 8.17E-02
6210.175 7.56E-02 7.70E-02 7.83E-02 8.00E-02 8.15E-02 8.30E-02
6210.125 7.64E-02 7.78E-02 7.91E-02 8.07E-02 8.23E-02 8.39E-02
6210.075 7.70E-02 7.84E-02 8.00E-02 8.17E-02 8.31E-02 8.46E-02
6210.025 7.78E-02 7.92E-02 8.07E-02 8.24E-02 8.39E-02 8.55E-02
6209.975 7.87E-02 8.02E-02 8.17E-02 8.34E-02 8.50E-02 8.65E-02
6209.925 7.96E-02 8.11E-02 8.27E-02 8.45E-02 8.62E-02 8.79E-02
6209.875 8.02E-02 8.18E-02 8.34E-02 8.52E-02 8.70E-02 8.87E-02
6209.825 8.06E-02 8.22E-02 8.38E-02 8.55E-02 8.75E-02 8.93E-02
6209.775 8.10E-02 8.25E-02 8.42E-02 8.59E-02 8.77E-02 8.96E-02
6209.725 8.14E-02 8.30E-02 8.47E-02 8.64E-02 8.81E-02 8.98E-02
6209.675 8.12E-02 8.28E-02 8.45E-02 8.62E-02 8.77E-02 8.95E-02
6209.625 8.01E-02 8.17E-02 8.32E-02 8.48E-02 8.64E-02 8.81E-02
6209.575 8.73E-02 7.97E-02 8.12E-02 8.27E-02 8.43E-02 8.58E-02
6209.525 7.61E-02 7.75E-02 7.89E-02 8.03E-02 8.18E-02 8.33E-02
6209.475 7.41E-02 7.55E-02 7.69E-02 7.84E-02 7.98E-02 8.14E-02
6209.425 7.26E-02 7.40E-02 7.54E-02 7.69E-02 7.85E-02 8.00E-02
6209.375 7.17E-02 7.31E-02 7.45E-02 7.60E-02 7.76E-02 7.91E-02
6209.325 7.11E-02 7.26E-02 7.40E-02 7.55E-02 7.70E-02 7.85E-02
6209.275 7.09E-02 7.24E-02 7.38E-02 7.53E-02 7.68E-02 7.82E-02
6209.225 7.08E-02 7.22E-02 7.37E-02 7.52E-02 7.67E-02 7.82E-02
6209.175 7.09E-02 7.24E-02 7.38E-02 7.53E-02 7.68E-02 7.84E-02
6209.125 7.13E-02 7.26E-02 7.41E-02 7.57E-02 7.72E-02 7.88E-02
6209.075 7.17E-02 7.29E-02 7.44E-02 7.59E-02 7.74E-02 7.90E-02
6209.025 7.19E-02 7.32E-02 7.45E-02 7.59E-02 7.75E-02 7.90E-02
6208.975 7.19E-02 7.32E-02 7.46E-02 7.60E-02 7.75E-02 7.92E-02
6208.925 7.19E-02 7.33E-02 7.48E-02 7.64E-02 7.81E-02 7.96E-02
6208.875 7.21E-02 7.36E-02 7.52E-02 7.70E-02 7.88E-02 8.05E-02
6208.825 7.27E-02 7.43E-02 7.60E-02 7.79E-02 7.99E-02 8.21E-02
6208.775 7.36E-02 7.54E-02 7.73E-02 7.93E-02 8.14E-02 8.36E-02
6208.725 7.48E-02 7.68E-02 7.88E-02 8.09E-02 8.29E-02 8.50E-02
6208.675 7.62E-02 7.82E-02 8.01E-02 8.21E-02 8.40E-02 8.57E-02
6208.625 7.74E-02 7.92E-02 8.09E-02 8.26E-02 8.41E-02 8.54E-02
6208.575 7.79E-02 7.95E-02 8.09E-02 8.22E-02 8.35E-02 8.47E-02
6208.525 7.78E-02 7.90E-02 8.02E-02 8.13E-02 8.25E-02 8.35E-02
6208.475 7.70E-02 7.81E-02 7.92E-02 8.02E-02 8.14E-02 8.25E-02
6208.425 7.60E-02 7.70E-02 7.81E-02 7.92E-02 8.03E-02 8.13E-02
6208.375 7.50E-02 7.60E-02 7.70E-02 7.80E-02 7.89E-02 7.97E-02
6208.325 7.39E-02 7.48E-02 7.57E-02 7.65E-02 7.72E-02 7.78E-02
6208.275 7.26E-02 7.34E-02 7.41E-02 7.47E-02 7.54E-02 7.60E-02
6208.225 7.11E-02 7.18E-02 7.24E-02 7.31E-02 7.38E-02 7.45E-02
6208.175 6.96E-02 7.02E-02 7.10E-02 7.17E-02 7.26E-02 7.35E-02
6208.125 6.82E-02 6.90E-02 6.98E-02 7.08E-02 7.18E-02 7.28E-02
6208.075 6.72E-02 6.81E-02 6.90E-02 7.01E-02 7.12E-02 7.24E-02
6208.025 6.64E-02 6.75E-02 6.85E-02 6.97E-02 7.08E-02 7.19E-02
6207.975 6.60E-02 6.71E-02 6.82E-02 6.93E-02 7.03E-02 7.11E-02
6207.925 6.57E-02 6.67E-02 6.77E-02 6.85E-02 6.93E-02 6.98E-02
6207.875 6.53E-02 6.61E-02 6.68E-02 6.74E-02 6.78E-02 6.80E-02
6207.825 6.45E-02 6.51E-02 6.55E-02 6.58E-02 6.59E-02 6.59E-02
6207.775 6.34E-02 6.37E-02 6.38E-02 6.39E-02 6.38E-02 6.37E-02
6207.725 6.18E-02 6.19E-02 6.19E-02 6.18E-02 6.18E-02 6.18E-02
6207.675 6.00E-02 6.00E-02 5.99E-02 5.99E-02 6.00E-02 6.02E-02
6207.625 5.81E-02 5.82E-02 5.82E-02 5.84E-02 5.87E-02 5.91E-02
6207.575 5.65E-02 5.67E-02 5.70E-02 5.74E-02 5.79E-02 5.85E-02
6207.525 5.51E-02 5.56E-02 5.61E-02 5.67E-02 5.74E-02 5.82E-02
6207.475 5.43E-02 5.49E-02 5.56E-02 5.63E-02 5.71E-02 5.79E-02



APPENDIX B Dispersion Modelling

6207.425 5.37E-02 5.45E-02 5.52E-02 5.60E-02 5.67E-02 5.74E-02
6207.375 5.33E-02 5.42E-02 5.50E-02 5.57E-02 5.62E-02 5.67E-02

X (km): 613.575 613.625 613.675 613.725 613.775 613.825

Y (km)

6212.375 7.25E-02 7.46E-02 7.66E-02 7.81E-02 8.06E-02 8.24E-02
6212.325 7.29E-02 7.47E-02 7.64E-02 7.84E-02 8.00E-02 8.26E-02
6212.275 7.31E-02 7.46E-02 7.67E-02 7.82E-02 8.04E-02 8.21E-02
6212.225 7.36E-02 7.48E-02 7.64E-02 7.85E-02 8.02E-02 8.25E-02
6212.175 7.41E-02 7.53E-02 7.65E-02 7.82E-02 8.05E-02 8.23E-02
6212.125 7.50E-02 7.59E-02 7.71E-02 7.89E-02 8.01E-02 8.25E-02
6212.075 7.60E-02 7.68E-02 7.77E-02 7.90E-02 8.09E-02 8.22E-02
6212.025 7.71E-02 7.78E-02 7.87E-02 7.96E-02 8.10E-02 8.30E-02
6211.975 7.76E-02 7.90E-02 7.97E-02 8.10E-02 8.17E-02 8.31E-02
6211.925 7.80E-02 7.95E-02 8.10E-02 8.18E-02 8.31E-02 8.38E-02
6211.875 7.86E-02 7.99E-02 8.14E-02 8.30E-02 8.39E-02 8.53E-02
6211.825 7.92E-02 8.08E-02 8.19E-02 8.35E-02 8.52E-02 8.61E-02
6211.775 8.05E-02 8.11E-02 8.28E-02 8.39E-02 8.59E-02 8.71E-02
6211.725 8.13E-02 8.22E-02 8.32E-02 8.49E-02 8.61E-02 8.81E-02
6211.675 8.27E-02 8.37E-02 8.43E-02 8.58E-02 8.70E-02 8.83E-02
6211.625 8.44E-02 8.51E-02 8.59E-02 8.66E-02 8.80E-02 8.93E-02
6211.575 8.58E-02 8.63E-02 8.74E-02 8.83E-02 8.89E-02 9.04E-02
6211.525 8.68E-02 8.80E-02 8.90E-02 8.99E-02 9.10E-02 9.17E-02
6211.475 8.75E-02 8.89E-02 9.03E-02 9.14E-02 9.23E-02 9.33E-02
6211.425 8.76E-02 8.92E-02 9.10E-02 9.25E-02 9.39E-02 9.53E-02
6211.375 8.73E-02 8.94E-02 9.12E-02 9.33E-02 9.48E-02 9.64E-02
6211.325 8.69E-02 8.92E-02 9.12E-02 9.34E-02 9.58E-02 9.73E-02
6211.275 8.68E-02 8.87E-02 9.12E-02 9.32E-02 9.57E-02 9.75E-02
6211.225 8.59E-02 8.81E-02 9.06E-02 9.28E-02 9.52E-02 9.78E-02
6211.175 8.54E-02 8.77E-02 8.99E-02 9.27E-02 9.48E-02 9.74E-02
6211.125 8.46E-02 8.73E-02 8.94E-02 9.19E-02 9.39E-02 9.68E-02
6211.075 8.37E-02 8.61E-02 8.84E-02 9.11E-02 9.33E-02 9.60E-02
6211.025 8.29E-02 8.53E-02 8.77E-02 9.00E-02 9.27E-02 9.50E-02
6210.975 8.19E-02 8.42E-02 8.68E-02 8.92E-02 9.18E-02 9.39E-02
6210.925 8.13E-02 8.32E-02 8.57E-02 8.79E-02 9.05E-02 9.29E-02
6210.875 8.05E-02 8.26E-02 8.50E-02 8.71E-02 8.92E-02 9.16E-02
6210.825 7.98E-02 8.21E-02 8.42E-02 8.63E-02 8.85E-02 9.06E-02
6210.775 7.87E-02 8.12E-02 8.35E-02 8.59E-02 8.77E-02 8.98E-02
6210.725 7.78E-02 8.01E-02 8.24E-02 8.49E-02 8.71E-02 8.97E-02
6210.675 7.67E-02 7.91E-02 8.14E-02 8.36E-02 8.61E-02 8.92E-02
6210.625 7.60E-02 7.82E-02 8.03E-02 8.29E-02 8.53E-02 8.80E-02
6210.575 7.58E-02 7.77E-02 7.96E-02 8.20E-02 8.43E-02 8.70E-02
6210.525 7.63E-02 7.79E-02 7.96E-02 8.16E-02 8.36E-02 8.60E-02
6210.475 7.72E-02 7.87E-02 8.01E-02 8.20E-02 8.38E-02 8.56E-02
6210.425 7.81E-02 7.98E-02 8.13E-02 8.30E-02 8.46E-02 8.61E-02
6210.375 7.90E-02 8.07E-02 8.23E-02 8.39E-02 8.58E-02 8.74E-02
6210.325 8.01E-02 8.18E-02 8.33E-02 8.49E-02 8.68E-02 8.84E-02
6210.275 8.16E-02 8.33E-02 8.47E-02 8.63E-02 8.82E-02 8.99E-02
6210.225 8.32E-02 8.49E-02 8.66E-02 8.81E-02 9.00E-02 9.17E-02
6210.175 8.44E-02 8.63E-02 8.81E-02 8.97E-02 9.15E-02 9.35E-02
6210.125 8.54E-02 8.70E-02 8.90E-02 9.09E-02 9.27E-02 9.49E-02
6210.075 8.64E-02 8.80E-02 8.98E-02 9.16E-02 9.35E-02 9.52E-02
6210.025 8.71E-02 8.88E-02 9.07E-02 9.24E-02 9.44E-02 9.62E-02
6209.975 8.82E-02 8.98E-02 9.16E-02 9.35E-02 9.55E-02 9.73E-02
6209.925 8.94E-02 9.11E-02 9.29E-02 9.49E-02 9.70E-02 9.90E-02
6209.875 9.05E-02 9.23E-02 9.41E-02 9.60E-02 9.80E-02 1.00E-01
6209.825 9.11E-02 9.28E-02 9.47E-02 9.66E-02 9.86E-02 1.01E-01
6209.775 9.13E-02 9.31E-02 9.48E-02 9.67E-02 9.88E-02 1.01E-01
6209.725 9.17E-02 9.35E-02 9.52E-02 9.72E-02 9.92E-02 1.01E-01
6209.675 9.13E-02 9.33E-02 9.53E-02 9.72E-02 9.92E-02 1.01E-01
6209.625 9.98E-02 9.18E-02 9.36E-02 9.55E-02 9.74E-02 9.94E-02
6209.575 8.75E-02 8.92E-02 9.11E-02 9.29E-02 9.48E-02 9.67E-02
6209.525 8.49E-02 8.65E-02 8.83E-02 9.01E-02 9.20E-02 9.40E-02
6209.475 8.29E-02 8.45E-02 8.62E-02 8.79E-02 8.99E-02 9.20E-02
6209.425 8.14E-02 8.31E-02 8.47E-02 8.65E-02 8.85E-02 9.07E-02
6209.375 8.07E-02 8.23E-02 8.39E-02 8.58E-02 8.78E-02 8.97E-02
6209.325 8.01E-02 8.18E-02 8.34E-02 8.52E-02 8.72E-02 8.92E-02
6209.275 7.98E-02 8.15E-02 8.32E-02 8.50E-02 8.68E-02 8.89E-02
6209.225 7.97E-02 8.15E-02 8.32E-02 8.51E-02 8.69E-02 8.90E-02



APPENDIX B Dispersion Modelling

6209.175	7.99E-02	8.17E-02	8.35E-02	8.53E-02	8.72E-02	8.93E-02
6209.125	8.03E-02	8.21E-02	8.38E-02	8.56E-02	8.75E-02	8.95E-02
6209.075	8.06E-02	8.22E-02	8.40E-02	8.58E-02	8.76E-02	8.97E-02
6209.025	8.06E-02	8.23E-02	8.41E-02	8.59E-02	8.80E-02	9.02E-02
6208.975	8.08E-02	8.25E-02	8.44E-02	8.65E-02	8.89E-02	9.14E-02
6208.925	8.14E-02	8.34E-02	8.56E-02	8.78E-02	9.05E-02	9.32E-02
6208.875	8.26E-02	8.47E-02	8.71E-02	8.97E-02	9.24E-02	9.53E-02
6208.825	8.41E-02	8.65E-02	8.90E-02	9.15E-02	9.41E-02	9.67E-02
6208.775	8.57E-02	8.81E-02	9.04E-02	9.26E-02	9.48E-02	9.69E-02
6208.725	8.70E-02	8.89E-02	9.08E-02	9.26E-02	9.44E-02	9.60E-02
6208.675	8.74E-02	8.89E-02	9.04E-02	9.17E-02	9.32E-02	9.45E-02
6208.625	8.68E-02	8.80E-02	8.93E-02	9.05E-02	9.18E-02	9.32E-02
6208.575	8.58E-02	8.69E-02	8.80E-02	8.93E-02	9.06E-02	9.20E-02
6208.525	8.47E-02	8.58E-02	8.69E-02	8.81E-02	8.92E-02	9.03E-02
6208.475	8.36E-02	8.46E-02	8.57E-02	8.65E-02	8.74E-02	8.81E-02
6208.425	8.22E-02	8.30E-02	8.38E-02	8.45E-02	8.52E-02	8.59E-02
6208.375	8.03E-02	8.10E-02	8.18E-02	8.24E-02	8.32E-02	8.40E-02
6208.325	7.85E-02	7.90E-02	7.98E-02	8.06E-02	8.16E-02	8.26E-02
6208.275	7.67E-02	7.74E-02	7.83E-02	7.93E-02	8.04E-02	8.17E-02
6208.225	7.53E-02	7.62E-02	7.73E-02	7.84E-02	7.97E-02	8.11E-02
6208.175	7.44E-02	7.55E-02	7.66E-02	7.79E-02	7.91E-02	8.03E-02
6208.125	7.39E-02	7.50E-02	7.61E-02	7.72E-02	7.82E-02	7.91E-02
6208.075	7.34E-02	7.45E-02	7.54E-02	7.62E-02	7.68E-02	7.73E-02
6208.025	7.28E-02	7.36E-02	7.42E-02	7.46E-02	7.49E-02	7.49E-02
6207.975	7.18E-02	7.22E-02	7.24E-02	7.25E-02	7.25E-02	7.25E-02
6207.925	7.02E-02	7.02E-02	7.01E-02	7.01E-02	7.01E-02	7.04E-02
6207.875	6.80E-02	6.79E-02	6.77E-02	6.78E-02	6.81E-02	6.87E-02
6207.825	6.56E-02	6.55E-02	6.55E-02	6.59E-02	6.66E-02	6.75E-02
6207.775	6.36E-02	6.37E-02	6.40E-02	6.46E-02	6.57E-02	6.68E-02
6207.725	6.20E-02	6.24E-02	6.31E-02	6.38E-02	6.48E-02	6.60E-02
6207.675	6.08E-02	6.15E-02	6.24E-02	6.32E-02	6.42E-02	6.52E-02
6207.625	5.99E-02	6.08E-02	6.18E-02	6.27E-02	6.34E-02	6.43E-02
6207.575	5.94E-02	6.03E-02	6.13E-02	6.20E-02	6.26E-02	6.31E-02
6207.525	5.90E-02	5.98E-02	6.05E-02	6.12E-02	6.16E-02	6.18E-02
6207.475	5.85E-02	5.91E-02	5.96E-02	6.01E-02	6.04E-02	6.03E-02
6207.425	5.79E-02	5.83E-02	5.87E-02	5.90E-02	5.91E-02	5.89E-02
6207.375	5.72E-02	5.76E-02	5.79E-02	5.80E-02	5.81E-02	5.81E-02

X (km): 613.875 613.925 613.975 614.025 614.075 614.125

Y (km)

6212.375	8.52E-02	8.78E-02	9.04E-02	9.30E-02	9.60E-02	9.83E-02
6212.325	8.45E-02	8.75E-02	9.02E-02	9.24E-02	9.55E-02	9.86E-02
6212.275	8.48E-02	8.74E-02	8.99E-02	9.27E-02	9.54E-02	9.81E-02
6212.225	8.43E-02	8.71E-02	8.97E-02	9.24E-02	9.52E-02	9.81E-02
6212.175	8.46E-02	8.69E-02	8.94E-02	9.22E-02	9.44E-02	9.79E-02
6212.125	8.44E-02	8.68E-02	8.92E-02	9.18E-02	9.47E-02	9.78E-02
6212.075	8.47E-02	8.66E-02	8.91E-02	9.17E-02	9.44E-02	9.75E-02
6212.025	8.43E-02	8.69E-02	8.94E-02	9.15E-02	9.43E-02	9.77E-02
6211.975	8.51E-02	8.65E-02	8.92E-02	9.18E-02	9.41E-02	9.70E-02
6211.925	8.53E-02	8.73E-02	8.88E-02	9.16E-02	9.44E-02	9.68E-02
6211.875	8.60E-02	8.78E-02	8.97E-02	9.13E-02	9.42E-02	9.71E-02
6211.825	8.76E-02	8.83E-02	9.02E-02	9.21E-02	9.39E-02	9.69E-02
6211.775	8.84E-02	8.99E-02	9.08E-02	9.28E-02	9.48E-02	9.72E-02
6211.725	8.94E-02	9.11E-02	9.25E-02	9.34E-02	9.54E-02	9.76E-02
6211.675	9.05E-02	9.19E-02	9.36E-02	9.51E-02	9.61E-02	9.82E-02
6211.625	9.09E-02	9.29E-02	9.44E-02	9.63E-02	9.79E-02	9.99E-02
6211.575	9.14E-02	9.34E-02	9.55E-02	9.74E-02	9.92E-02	1.01E-01
6211.525	9.29E-02	9.39E-02	9.60E-02	9.82E-02	1.00E-01	1.02E-01
6211.475	9.43E-02	9.55E-02	9.70E-02	9.87E-02	1.01E-01	1.03E-01
6211.425	9.60E-02	9.74E-02	9.83E-02	9.98E-02	1.02E-01	1.04E-01
6211.375	9.77E-02	9.88E-02	1.00E-01	1.01E-01	1.03E-01	1.05E-01
6211.325	9.93E-02	1.00E-01	1.02E-01	1.03E-01	1.04E-01	1.06E-01
6211.275	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.08E-01
6211.225	9.97E-02	1.02E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01
6211.175	9.95E-02	1.02E-01	1.05E-01	1.07E-01	1.10E-01	1.11E-01
6211.125	9.90E-02	1.02E-01	1.04E-01	1.07E-01	1.10E-01	1.12E-01
6211.075	9.86E-02	1.01E-01	1.04E-01	1.07E-01	1.10E-01	1.12E-01
6211.025	9.77E-02	1.00E-01	1.03E-01	1.06E-01	1.09E-01	1.12E-01
6210.975	9.69E-02	9.94E-02	1.02E-01	1.05E-01	1.08E-01	1.11E-01



APPENDIX B Dispersion Modelling

6210.925	9.59E-02	9.84E-02	1.01E-01	1.04E-01	1.07E-01	1.11E-01
6210.875	9.45E-02	9.73E-02	1.00E-01	1.04E-01	1.07E-01	1.10E-01
6210.825	9.32E-02	9.63E-02	9.92E-02	1.03E-01	1.06E-01	1.09E-01
6210.775	9.25E-02	9.52E-02	9.80E-02	1.02E-01	1.05E-01	1.09E-01
6210.725	9.18E-02	9.48E-02	9.75E-02	1.01E-01	1.04E-01	1.08E-01
6210.675	9.17E-02	9.44E-02	9.74E-02	1.01E-01	1.04E-01	1.07E-01
6210.625	9.08E-02	9.38E-02	9.72E-02	1.01E-01	1.04E-01	1.07E-01
6210.575	8.98E-02	9.28E-02	9.63E-02	9.95E-02	1.03E-01	1.07E-01
6210.525	8.88E-02	9.15E-02	9.48E-02	9.83E-02	1.02E-01	1.06E-01
6210.475	8.80E-02	9.04E-02	9.35E-02	9.66E-02	1.00E-01	1.04E-01
6210.425	8.83E-02	9.04E-02	9.29E-02	9.54E-02	9.84E-02	1.02E-01
6210.375	8.93E-02	9.12E-02	9.32E-02	9.55E-02	9.80E-02	1.01E-01
6210.325	9.01E-02	9.24E-02	9.45E-02	9.68E-02	9.88E-02	1.01E-01
6210.275	9.16E-02	9.32E-02	9.53E-02	9.78E-02	1.01E-01	1.03E-01
6210.225	9.33E-02	9.50E-02	9.65E-02	9.88E-02	1.01E-01	1.04E-01
6210.175	9.52E-02	9.68E-02	9.86E-02	1.00E-01	1.02E-01	1.05E-01
6210.125	9.67E-02	9.83E-02	1.00E-01	1.02E-01	1.04E-01	1.07E-01
6210.075	9.73E-02	9.92E-02	1.01E-01	1.03E-01	1.06E-01	1.08E-01
6210.025	9.81E-02	1.00E-01	1.02E-01	1.04E-01	1.07E-01	1.10E-01
6209.975	9.93E-02	1.01E-01	1.04E-01	1.06E-01	1.08E-01	1.11E-01
6209.925	1.01E-01	1.03E-01	1.05E-01	1.07E-01	1.10E-01	1.12E-01
6209.875	1.02E-01	1.04E-01	1.06E-01	1.09E-01	1.11E-01	1.14E-01
6209.825	1.03E-01	1.05E-01	1.08E-01	1.10E-01	1.13E-01	1.15E-01
6209.775	1.04E-01	1.06E-01	1.09E-01	1.11E-01	1.14E-01	1.16E-01
6209.725	1.04E-01	1.06E-01	1.09E-01	1.12E-01	1.14E-01	1.17E-01
6209.675	1.03E-01	1.06E-01	1.09E-01	1.12E-01	1.15E-01	1.17E-01
6209.625	1.02E-01	1.04E-01	1.07E-01	1.10E-01	1.13E-01	1.16E-01
6209.575	9.88E-02	1.01E-01	1.03E-01	1.06E-01	1.09E-01	1.12E-01
6209.525	9.59E-02	9.80E-02	1.00E-01	1.02E-01	1.05E-01	1.09E-01
6209.475	9.39E-02	9.59E-02	9.78E-02	1.00E-01	1.03E-01	1.06E-01
6209.425	9.28E-02	9.47E-02	9.67E-02	9.90E-02	1.02E-01	1.05E-01
6209.375	9.18E-02	9.38E-02	9.60E-02	9.85E-02	1.01E-01	1.04E-01
6209.325	9.13E-02	9.34E-02	9.57E-02	9.81E-02	1.01E-01	1.04E-01
6209.275	9.10E-02	9.32E-02	9.56E-02	9.80E-02	1.01E-01	1.04E-01
6209.225	9.11E-02	9.35E-02	9.59E-02	9.85E-02	1.01E-01	1.04E-01
6209.175	9.15E-02	9.39E-02	9.64E-02	9.89E-02	1.01E-01	1.04E-01
6209.125	9.18E-02	9.41E-02	9.66E-02	9.91E-02	1.02E-01	1.05E-01
6209.075	9.20E-02	9.44E-02	9.69E-02	9.96E-02	1.03E-01	1.06E-01
6209.025	9.27E-02	9.51E-02	9.79E-02	1.01E-01	1.04E-01	1.08E-01
6208.975	9.40E-02	9.66E-02	9.96E-02	1.03E-01	1.06E-01	1.10E-01
6208.925	9.59E-02	9.87E-02	1.02E-01	1.05E-01	1.08E-01	1.11E-01
6208.875	9.80E-02	1.01E-01	1.03E-01	1.06E-01	1.08E-01	1.11E-01
6208.825	9.91E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01	1.10E-01
6208.775	9.87E-02	1.00E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01
6208.725	9.75E-02	9.91E-02	1.01E-01	1.02E-01	1.04E-01	1.07E-01
6208.675	9.60E-02	9.76E-02	9.93E-02	1.01E-01	1.03E-01	1.05E-01
6208.625	9.48E-02	9.63E-02	9.79E-02	9.95E-02	1.01E-01	1.02E-01
6208.575	9.33E-02	9.46E-02	9.59E-02	9.71E-02	9.83E-02	9.96E-02
6208.525	9.14E-02	9.24E-02	9.34E-02	9.44E-02	9.56E-02	9.70E-02
6208.475	8.90E-02	8.98E-02	9.10E-02	9.22E-02	9.36E-02	9.52E-02
6208.425	8.68E-02	8.77E-02	8.90E-02	9.05E-02	9.22E-02	9.40E-02
6208.375	8.50E-02	8.62E-02	8.78E-02	8.95E-02	9.12E-02	9.29E-02
6208.325	8.39E-02	8.53E-02	8.69E-02	8.85E-02	9.00E-02	9.14E-02
6208.275	8.32E-02	8.46E-02	8.60E-02	8.74E-02	8.86E-02	8.93E-02
6208.225	8.25E-02	8.37E-02	8.48E-02	8.57E-02	8.64E-02	8.68E-02
6208.175	8.14E-02	8.24E-02	8.30E-02	8.34E-02	8.37E-02	8.40E-02
6208.125	7.98E-02	8.03E-02	8.06E-02	8.07E-02	8.10E-02	8.16E-02
6208.075	7.76E-02	7.78E-02	7.80E-02	7.83E-02	7.89E-02	7.99E-02
6208.025	7.51E-02	7.53E-02	7.56E-02	7.64E-02	7.73E-02	7.86E-02
6207.975	7.27E-02	7.32E-02	7.39E-02	7.50E-02	7.62E-02	7.77E-02
6207.925	7.09E-02	7.16E-02	7.27E-02	7.40E-02	7.53E-02	7.66E-02
6207.875	6.95E-02	7.06E-02	7.17E-02	7.29E-02	7.39E-02	7.51E-02
6207.825	6.86E-02	6.96E-02	7.08E-02	7.16E-02	7.23E-02	7.34E-02
6207.775	6.78E-02	6.88E-02	6.96E-02	7.03E-02	7.09E-02	7.16E-02
6207.725	6.71E-02	6.78E-02	6.84E-02	6.89E-02	6.92E-02	6.95E-02
6207.675	6.62E-02	6.68E-02	6.73E-02	6.76E-02	6.74E-02	6.74E-02
6207.625	6.50E-02	6.57E-02	6.61E-02	6.63E-02	6.61E-02	6.57E-02
6207.575	6.39E-02	6.44E-02	6.47E-02	6.48E-02	6.46E-02	6.41E-02
6207.525	6.23E-02	6.27E-02	6.29E-02	6.31E-02	6.29E-02	6.24E-02
6207.475	6.03E-02	6.05E-02	6.08E-02	6.08E-02	6.08E-02	6.02E-02
6207.425	5.89E-02	5.87E-02	5.85E-02	5.85E-02	5.85E-02	5.80E-02



APPENDIX B Dispersion Modelling

6207.375 5.79E-02 5.76E-02 5.68E-02 5.58E-02 5.49E-02 5.44E-02

X (km): 614.175 614.225 614.275 614.325 614.375 614.425

Y (km)						
6212.375	1.01E-01	1.02E-01	1.04E-01	1.06E-01	1.06E-01	1.07E-01
6212.325	1.01E-01	1.03E-01	1.05E-01	1.07E-01	1.08E-01	1.09E-01
6212.275	1.01E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01
6212.225	1.01E-01	1.04E-01	1.07E-01	1.09E-01	1.11E-01	1.13E-01
6212.175	1.01E-01	1.04E-01	1.07E-01	1.10E-01	1.12E-01	1.15E-01
6212.125	1.01E-01	1.04E-01	1.07E-01	1.10E-01	1.13E-01	1.15E-01
6212.075	1.01E-01	1.04E-01	1.07E-01	1.10E-01	1.14E-01	1.17E-01
6212.025	1.00E-01	1.04E-01	1.07E-01	1.10E-01	1.14E-01	1.17E-01
6211.975	1.01E-01	1.03E-01	1.07E-01	1.10E-01	1.15E-01	1.17E-01
6211.925	9.98E-02	1.03E-01	1.07E-01	1.10E-01	1.14E-01	1.18E-01
6211.875	9.97E-02	1.03E-01	1.06E-01	1.10E-01	1.14E-01	1.17E-01
6211.825	1.00E-01	1.03E-01	1.06E-01	1.10E-01	1.14E-01	1.18E-01
6211.775	9.98E-02	1.03E-01	1.06E-01	1.09E-01	1.13E-01	1.18E-01
6211.725	1.00E-01	1.03E-01	1.06E-01	1.10E-01	1.14E-01	1.17E-01
6211.675	1.00E-01	1.03E-01	1.06E-01	1.10E-01	1.13E-01	1.17E-01
6211.625	1.01E-01	1.04E-01	1.06E-01	1.09E-01	1.13E-01	1.17E-01
6211.575	1.03E-01	1.04E-01	1.07E-01	1.10E-01	1.14E-01	1.17E-01
6211.525	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.14E-01	1.18E-01
6211.475	1.05E-01	1.07E-01	1.10E-01	1.11E-01	1.14E-01	1.18E-01
6211.425	1.06E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01	1.18E-01
6211.375	1.07E-01	1.10E-01	1.12E-01	1.15E-01	1.17E-01	1.19E-01
6211.325	1.08E-01	1.10E-01	1.13E-01	1.16E-01	1.19E-01	1.21E-01
6211.275	1.10E-01	1.12E-01	1.14E-01	1.17E-01	1.20E-01	1.23E-01
6211.225	1.11E-01	1.13E-01	1.15E-01	1.17E-01	1.21E-01	1.24E-01
6211.175	1.13E-01	1.15E-01	1.17E-01	1.19E-01	1.22E-01	1.25E-01
6211.125	1.14E-01	1.17E-01	1.19E-01	1.21E-01	1.23E-01	1.26E-01
6211.075	1.15E-01	1.18E-01	1.21E-01	1.23E-01	1.25E-01	1.28E-01
6211.025	1.16E-01	1.18E-01	1.22E-01	1.25E-01	1.27E-01	1.30E-01
6210.975	1.15E-01	1.18E-01	1.22E-01	1.26E-01	1.28E-01	1.32E-01
6210.925	1.14E-01	1.17E-01	1.21E-01	1.26E-01	1.30E-01	1.33E-01
6210.875	1.14E-01	1.17E-01	1.21E-01	1.25E-01	1.29E-01	1.33E-01
6210.825	1.13E-01	1.16E-01	1.20E-01	1.24E-01	1.28E-01	1.32E-01
6210.775	1.11E-01	1.15E-01	1.19E-01	1.23E-01	1.28E-01	1.32E-01
6210.725	1.10E-01	1.14E-01	1.18E-01	1.22E-01	1.27E-01	1.31E-01
6210.675	1.09E-01	1.13E-01	1.17E-01	1.21E-01	1.25E-01	1.30E-01
6210.625	1.09E-01	1.13E-01	1.17E-01	1.19E-01	1.23E-01	1.29E-01
6210.575	1.10E-01	1.13E-01	1.16E-01	1.20E-01	1.24E-01	1.27E-01
6210.525	1.09E-01	1.13E-01	1.17E-01	1.21E-01	1.24E-01	1.28E-01
6210.475	1.08E-01	1.12E-01	1.16E-01	1.21E-01	1.24E-01	1.28E-01
6210.425	1.06E-01	1.10E-01	1.14E-01	1.19E-01	1.24E-01	1.28E-01
6210.375	1.04E-01	1.08E-01	1.11E-01	1.16E-01	1.20E-01	1.25E-01
6210.325	1.04E-01	1.07E-01	1.10E-01	1.13E-01	1.17E-01	1.22E-01
6210.275	1.05E-01	1.07E-01	1.10E-01	1.13E-01	1.16E-01	1.19E-01
6210.225	1.06E-01	1.09E-01	1.11E-01	1.14E-01	1.17E-01	1.20E-01
6210.175	1.08E-01	1.10E-01	1.13E-01	1.16E-01	1.19E-01	1.23E-01
6210.125	1.09E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.26E-01
6210.075	1.11E-01	1.14E-01	1.16E-01	1.20E-01	1.24E-01	1.28E-01
6210.025	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.25E-01	1.29E-01
6209.975	1.14E-01	1.16E-01	1.19E-01	1.23E-01	1.27E-01	1.30E-01
6209.925	1.15E-01	1.18E-01	1.21E-01	1.25E-01	1.28E-01	1.32E-01
6209.875	1.17E-01	1.20E-01	1.23E-01	1.27E-01	1.30E-01	1.34E-01
6209.825	1.18E-01	1.21E-01	1.25E-01	1.28E-01	1.32E-01	1.36E-01
6209.775	1.19E-01	1.22E-01	1.26E-01	1.29E-01	1.33E-01	1.37E-01
6209.725	1.20E-01	1.23E-01	1.26E-01	1.30E-01	1.34E-01	1.38E-01
6209.675	1.20E-01	1.23E-01	1.26E-01	1.30E-01	1.34E-01	1.38E-01
6209.625	1.18E-01	1.21E-01	1.24E-01	1.28E-01	1.32E-01	1.36E-01
6209.575	1.15E-01	1.18E-01	1.21E-01	1.24E-01	1.28E-01	1.32E-01
6209.525	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.25E-01	1.29E-01
6209.475	1.09E-01	1.13E-01	1.16E-01	1.20E-01	1.23E-01	1.26E-01
6209.425	1.08E-01	1.11E-01	1.15E-01	1.18E-01	1.21E-01	1.25E-01
6209.375	1.07E-01	1.10E-01	1.14E-01	1.17E-01	1.20E-01	1.23E-01
6209.325	1.06E-01	1.10E-01	1.12E-01	1.15E-01	1.19E-01	1.22E-01
6209.275	1.06E-01	1.09E-01	1.12E-01	1.15E-01	1.19E-01	1.23E-01
6209.225	1.07E-01	1.10E-01	1.13E-01	1.16E-01	1.20E-01	1.24E-01
6209.175	1.07E-01	1.10E-01	1.13E-01	1.17E-01	1.21E-01	1.25E-01



APPENDIX B Dispersion Modelling

6209.125	1.08E-01	1.11E-01	1.15E-01	1.19E-01	1.23E-01	1.28E-01
6209.075	1.09E-01	1.13E-01	1.17E-01	1.22E-01	1.26E-01	1.31E-01
6209.025	1.11E-01	1.16E-01	1.20E-01	1.24E-01	1.28E-01	1.33E-01
6208.975	1.14E-01	1.17E-01	1.21E-01	1.25E-01	1.28E-01	1.32E-01
6208.925	1.14E-01	1.17E-01	1.20E-01	1.23E-01	1.27E-01	1.30E-01
6208.875	1.14E-01	1.16E-01	1.19E-01	1.21E-01	1.25E-01	1.28E-01
6208.825	1.12E-01	1.14E-01	1.17E-01	1.20E-01	1.23E-01	1.26E-01
6208.775	1.11E-01	1.13E-01	1.16E-01	1.18E-01	1.20E-01	1.23E-01
6208.725	1.09E-01	1.11E-01	1.13E-01	1.15E-01	1.17E-01	1.18E-01
6208.675	1.07E-01	1.09E-01	1.10E-01	1.12E-01	1.13E-01	1.15E-01
6208.625	1.04E-01	1.05E-01	1.07E-01	1.08E-01	1.10E-01	1.12E-01
6208.575	1.01E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01
6208.525	9.85E-02	1.00E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01
6208.475	9.68E-02	9.87E-02	1.01E-01	1.02E-01	1.04E-01	1.05E-01
6208.425	9.57E-02	9.73E-02	9.88E-02	1.00E-01	1.01E-01	1.02E-01
6208.375	9.43E-02	9.55E-02	9.65E-02	9.73E-02	9.77E-02	9.82E-02
6208.325	9.23E-02	9.31E-02	9.36E-02	9.40E-02	9.45E-02	9.54E-02
6208.275	8.98E-02	9.02E-02	9.05E-02	9.10E-02	9.21E-02	9.37E-02
6208.225	8.70E-02	8.73E-02	8.79E-02	8.90E-02	9.06E-02	9.24E-02
6208.175	8.44E-02	8.51E-02	8.61E-02	8.75E-02	8.94E-02	9.10E-02
6208.125	8.24E-02	8.35E-02	8.49E-02	8.65E-02	8.81E-02	8.93E-02
6208.075	8.11E-02	8.25E-02	8.40E-02	8.53E-02	8.64E-02	8.73E-02
6208.025	8.02E-02	8.16E-02	8.27E-02	8.37E-02	8.45E-02	8.52E-02
6207.975	7.91E-02	8.02E-02	8.11E-02	8.17E-02	8.24E-02	8.30E-02
6207.925	7.79E-02	7.87E-02	7.92E-02	7.96E-02	8.00E-02	8.06E-02
6207.875	7.65E-02	7.69E-02	7.72E-02	7.74E-02	7.78E-02	7.84E-02
6207.825	7.43E-02	7.49E-02	7.51E-02	7.51E-02	7.54E-02	7.58E-02
6207.775	7.24E-02	7.30E-02	7.31E-02	7.27E-02	7.22E-02	7.25E-02
6207.725	7.00E-02	7.05E-02	7.07E-02	6.99E-02	6.90E-02	6.93E-02
6207.675	6.76E-02	6.78E-02	6.80E-02	6.70E-02	6.61E-02	6.72E-02
6207.625	6.53E-02	6.49E-02	6.46E-02	6.37E-02	6.35E-02	6.56E-02
6207.575	6.35E-02	6.17E-02	6.12E-02	6.06E-02	6.15E-02	6.39E-02
6207.525	6.16E-02	5.95E-02	5.84E-02	5.86E-02	5.94E-02	6.16E-02
6207.475	5.96E-02	5.86E-02	5.76E-02	5.73E-02	5.77E-02	5.95E-02
6207.425	5.75E-02	5.71E-02	5.73E-02	5.70E-02	5.67E-02	5.82E-02
6207.375	5.44E-02	5.51E-02	5.58E-02	5.61E-02	5.64E-02	5.77E-02

X (km): 614.475 614.525 614.575 614.625 614.675 614.725

Y (km)

6212.375	1.08E-01	1.09E-01	1.10E-01	1.12E-01	1.12E-01	1.13E-01
6212.325	1.10E-01	1.11E-01	1.11E-01	1.13E-01	1.14E-01	1.15E-01
6212.275	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.16E-01	1.17E-01
6212.225	1.14E-01	1.15E-01	1.15E-01	1.17E-01	1.18E-01	1.20E-01
6212.175	1.16E-01	1.17E-01	1.18E-01	1.19E-01	1.21E-01	1.21E-01
6212.125	1.17E-01	1.19E-01	1.20E-01	1.21E-01	1.23E-01	1.24E-01
6212.075	1.18E-01	1.20E-01	1.23E-01	1.24E-01	1.25E-01	1.25E-01
6212.025	1.20E-01	1.23E-01	1.24E-01	1.25E-01	1.27E-01	1.28E-01
6211.975	1.20E-01	1.23E-01	1.26E-01	1.28E-01	1.30E-01	1.31E-01
6211.925	1.22E-01	1.24E-01	1.27E-01	1.29E-01	1.32E-01	1.34E-01
6211.875	1.21E-01	1.25E-01	1.29E-01	1.32E-01	1.33E-01	1.35E-01
6211.825	1.21E-01	1.25E-01	1.30E-01	1.33E-01	1.36E-01	1.38E-01
6211.775	1.22E-01	1.26E-01	1.30E-01	1.33E-01	1.37E-01	1.40E-01
6211.725	1.21E-01	1.26E-01	1.31E-01	1.35E-01	1.39E-01	1.42E-01
6211.675	1.22E-01	1.25E-01	1.30E-01	1.35E-01	1.40E-01	1.43E-01
6211.625	1.21E-01	1.26E-01	1.31E-01	1.36E-01	1.40E-01	1.45E-01
6211.575	1.21E-01	1.26E-01	1.31E-01	1.35E-01	1.41E-01	1.46E-01
6211.525	1.22E-01	1.25E-01	1.30E-01	1.35E-01	1.41E-01	1.46E-01
6211.475	1.22E-01	1.26E-01	1.31E-01	1.35E-01	1.41E-01	1.46E-01
6211.425	1.22E-01	1.26E-01	1.31E-01	1.36E-01	1.41E-01	1.47E-01
6211.375	1.22E-01	1.26E-01	1.31E-01	1.36E-01	1.41E-01	1.47E-01
6211.325	1.23E-01	1.27E-01	1.31E-01	1.36E-01	1.41E-01	1.46E-01
6211.275	1.25E-01	1.28E-01	1.32E-01	1.36E-01	1.41E-01	1.46E-01
6211.225	1.27E-01	1.30E-01	1.33E-01	1.37E-01	1.41E-01	1.46E-01
6211.175	1.29E-01	1.32E-01	1.35E-01	1.38E-01	1.43E-01	1.48E-01
6211.125	1.30E-01	1.33E-01	1.37E-01	1.40E-01	1.44E-01	1.48E-01
6211.075	1.31E-01	1.34E-01	1.38E-01	1.42E-01	1.45E-01	1.49E-01
6211.025	1.33E-01	1.35E-01	1.40E-01	1.43E-01	1.47E-01	1.51E-01
6210.975	1.35E-01	1.37E-01	1.40E-01	1.44E-01	1.49E-01	1.54E-01
6210.925	1.36E-01	1.39E-01	1.41E-01	1.45E-01	1.50E-01	1.55E-01



APPENDIX B Dispersion Modelling

6210.875	1.37E-01	1.40E-01	1.43E-01	1.47E-01	1.52E-01	1.57E-01
6210.825	1.36E-01	1.40E-01	1.45E-01	1.50E-01	1.55E-01	1.60E-01
6210.775	1.37E-01	1.42E-01	1.48E-01	1.52E-01	1.56E-01	1.61E-01
6210.725	1.38E-01	1.43E-01	1.48E-01	1.54E-01	1.59E-01	1.63E-01
6210.675	1.36E-01	1.42E-01	1.48E-01	1.55E-01	1.60E-01	1.65E-01
6210.625	1.34E-01	1.40E-01	1.48E-01	1.55E-01	1.61E-01	1.68E-01
6210.575	1.31E-01	1.38E-01	1.46E-01	1.53E-01	1.60E-01	1.67E-01
6210.525	1.30E-01	1.35E-01	1.41E-01	1.48E-01	1.57E-01	1.65E-01
6210.475	1.32E-01	1.34E-01	1.38E-01	1.45E-01	1.53E-01	1.61E-01
6210.425	1.31E-01	1.35E-01	1.38E-01	1.42E-01	1.49E-01	1.57E-01
6210.375	1.30E-01	1.34E-01	1.37E-01	1.42E-01	1.47E-01	1.54E-01
6210.325	1.26E-01	1.31E-01	1.36E-01	1.41E-01	1.46E-01	1.52E-01
6210.275	1.23E-01	1.27E-01	1.32E-01	1.38E-01	1.44E-01	1.51E-01
6210.225	1.23E-01	1.26E-01	1.31E-01	1.36E-01	1.42E-01	1.48E-01
6210.175	1.26E-01	1.29E-01	1.32E-01	1.37E-01	1.41E-01	1.46E-01
6210.125	1.30E-01	1.32E-01	1.36E-01	1.39E-01	1.43E-01	1.47E-01
6210.075	1.31E-01	1.34E-01	1.38E-01	1.42E-01	1.47E-01	1.52E-01
6210.025	1.33E-01	1.36E-01	1.40E-01	1.44E-01	1.49E-01	1.54E-01
6209.975	1.34E-01	1.38E-01	1.42E-01	1.46E-01	1.51E-01	1.56E-01
6209.925	1.36E-01	1.40E-01	1.44E-01	1.49E-01	1.54E-01	1.59E-01
6209.875	1.38E-01	1.42E-01	1.47E-01	1.51E-01	1.56E-01	1.61E-01
6209.825	1.40E-01	1.44E-01	1.48E-01	1.54E-01	1.59E-01	1.64E-01
6209.775	1.41E-01	1.45E-01	1.50E-01	1.55E-01	1.61E-01	1.67E-01
6209.725	1.42E-01	1.47E-01	1.51E-01	1.57E-01	1.62E-01	1.68E-01
6209.675	1.42E-01	1.47E-01	1.51E-01	1.56E-01	1.62E-01	1.68E-01
6209.625	1.40E-01	1.45E-01	1.49E-01	1.54E-01	1.60E-01	1.65E-01
6209.575	1.36E-01	1.40E-01	1.45E-01	1.49E-01	1.54E-01	1.60E-01
6209.525	1.33E-01	1.37E-01	1.41E-01	1.45E-01	1.50E-01	1.55E-01
6209.475	1.30E-01	1.34E-01	1.38E-01	1.43E-01	1.47E-01	1.53E-01
6209.425	1.28E-01	1.32E-01	1.36E-01	1.40E-01	1.45E-01	1.50E-01
6209.375	1.27E-01	1.31E-01	1.35E-01	1.39E-01	1.44E-01	1.49E-01
6209.325	1.26E-01	1.31E-01	1.35E-01	1.40E-01	1.45E-01	1.50E-01
6209.275	1.27E-01	1.32E-01	1.37E-01	1.42E-01	1.47E-01	1.53E-01
6209.225	1.28E-01	1.33E-01	1.38E-01	1.44E-01	1.50E-01	1.56E-01
6209.175	1.30E-01	1.36E-01	1.42E-01	1.48E-01	1.53E-01	1.58E-01
6209.125	1.34E-01	1.39E-01	1.44E-01	1.50E-01	1.54E-01	1.58E-01
6209.075	1.36E-01	1.41E-01	1.45E-01	1.49E-01	1.52E-01	1.56E-01
6209.025	1.36E-01	1.40E-01	1.43E-01	1.46E-01	1.50E-01	1.54E-01
6208.975	1.35E-01	1.38E-01	1.40E-01	1.43E-01	1.47E-01	1.51E-01
6208.925	1.33E-01	1.35E-01	1.38E-01	1.41E-01	1.44E-01	1.48E-01
6208.875	1.31E-01	1.33E-01	1.35E-01	1.38E-01	1.40E-01	1.42E-01
6208.825	1.28E-01	1.30E-01	1.31E-01	1.33E-01	1.35E-01	1.37E-01
6208.775	1.24E-01	1.25E-01	1.27E-01	1.28E-01	1.31E-01	1.34E-01
6208.725	1.20E-01	1.22E-01	1.23E-01	1.26E-01	1.28E-01	1.31E-01
6208.675	1.16E-01	1.18E-01	1.21E-01	1.23E-01	1.26E-01	1.28E-01
6208.625	1.14E-01	1.16E-01	1.18E-01	1.20E-01	1.22E-01	1.24E-01
6208.575	1.12E-01	1.14E-01	1.15E-01	1.17E-01	1.18E-01	1.19E-01
6208.525	1.09E-01	1.11E-01	1.11E-01	1.12E-01	1.13E-01	1.15E-01
6208.475	1.06E-01	1.07E-01	1.07E-01	1.08E-01	1.11E-01	1.14E-01
6208.425	1.02E-01	1.03E-01	1.04E-01	1.06E-01	1.09E-01	1.12E-01
6208.375	9.90E-02	1.01E-01	1.03E-01	1.05E-01	1.08E-01	1.10E-01
6208.325	9.70E-02	9.89E-02	1.01E-01	1.04E-01	1.05E-01	1.07E-01
6208.275	9.56E-02	9.77E-02	9.96E-02	1.01E-01	1.02E-01	1.03E-01
6208.225	9.43E-02	9.59E-02	9.73E-02	9.85E-02	9.95E-02	1.00E-01
6208.175	9.25E-02	9.35E-02	9.47E-02	9.56E-02	9.63E-02	9.70E-02
6208.125	9.04E-02	9.13E-02	9.20E-02	9.27E-02	9.34E-02	9.36E-02
6208.075	8.80E-02	8.87E-02	8.93E-02	8.99E-02	9.00E-02	8.96E-02
6208.025	8.56E-02	8.62E-02	8.67E-02	8.68E-02	8.60E-02	8.57E-02
6207.975	8.34E-02	8.37E-02	8.38E-02	8.31E-02	8.20E-02	8.24E-02
6207.925	8.10E-02	8.05E-02	7.96E-02	7.89E-02	7.89E-02	8.01E-02
6207.875	7.84E-02	7.77E-02	7.58E-02	7.53E-02	7.59E-02	7.78E-02
6207.825	7.54E-02	7.49E-02	7.42E-02	7.35E-02	7.43E-02	7.67E-02
6207.775	7.26E-02	7.26E-02	7.30E-02	7.22E-02	7.32E-02	7.65E-02
6207.725	7.00E-02	7.10E-02	7.16E-02	7.11E-02	7.25E-02	7.58E-02
6207.675	6.85E-02	7.01E-02	7.14E-02	7.07E-02	7.22E-02	7.47E-02
6207.625	6.74E-02	6.94E-02	7.10E-02	7.08E-02	7.15E-02	7.31E-02
6207.575	6.67E-02	6.86E-02	7.05E-02	7.02E-02	7.00E-02	7.13E-02
6207.525	6.46E-02	6.74E-02	6.83E-02	6.79E-02	6.80E-02	7.04E-02
6207.475	6.29E-02	6.50E-02	6.62E-02	6.65E-02	6.72E-02	6.97E-02
6207.425	6.03E-02	6.19E-02	6.46E-02	6.53E-02	6.64E-02	6.90E-02
6207.375	5.96E-02	6.14E-02	6.29E-02	6.43E-02	6.53E-02	6.83E-02



APPENDIX B Dispersion Modelling

X (km): 614.775 614.825 614.875 614.925 614.975 615.025

Y (km)						
6212.375	1.14E-01	1.13E-01	1.12E-01	1.10E-01	1.08E-01	1.07E-01
6212.325	1.16E-01	1.15E-01	1.15E-01	1.14E-01	1.13E-01	1.10E-01
6212.275	1.18E-01	1.19E-01	1.18E-01	1.17E-01	1.16E-01	1.13E-01
6212.225	1.21E-01	1.22E-01	1.21E-01	1.21E-01	1.19E-01	1.18E-01
6212.175	1.23E-01	1.24E-01	1.24E-01	1.24E-01	1.23E-01	1.21E-01
6212.125	1.25E-01	1.27E-01	1.27E-01	1.27E-01	1.27E-01	1.25E-01
6212.075	1.28E-01	1.29E-01	1.30E-01	1.31E-01	1.30E-01	1.29E-01
6212.025	1.30E-01	1.31E-01	1.33E-01	1.34E-01	1.34E-01	1.33E-01
6211.975	1.32E-01	1.34E-01	1.35E-01	1.37E-01	1.37E-01	1.37E-01
6211.925	1.35E-01	1.36E-01	1.38E-01	1.40E-01	1.42E-01	1.42E-01
6211.875	1.38E-01	1.39E-01	1.41E-01	1.42E-01	1.44E-01	1.45E-01
6211.825	1.40E-01	1.42E-01	1.44E-01	1.46E-01	1.48E-01	1.49E-01
6211.775	1.43E-01	1.45E-01	1.46E-01	1.48E-01	1.50E-01	1.52E-01
6211.725	1.45E-01	1.48E-01	1.50E-01	1.52E-01	1.54E-01	1.56E-01
6211.675	1.47E-01	1.50E-01	1.52E-01	1.55E-01	1.58E-01	1.60E-01
6211.625	1.49E-01	1.52E-01	1.55E-01	1.58E-01	1.60E-01	1.62E-01
6211.575	1.51E-01	1.55E-01	1.58E-01	1.62E-01	1.64E-01	1.67E-01
6211.525	1.51E-01	1.56E-01	1.60E-01	1.64E-01	1.67E-01	1.70E-01
6211.475	1.52E-01	1.57E-01	1.62E-01	1.66E-01	1.71E-01	1.74E-01
6211.425	1.53E-01	1.59E-01	1.64E-01	1.69E-01	1.73E-01	1.77E-01
6211.375	1.53E-01	1.59E-01	1.65E-01	1.71E-01	1.76E-01	1.80E-01
6211.325	1.53E-01	1.59E-01	1.66E-01	1.72E-01	1.78E-01	1.84E-01
6211.275	1.52E-01	1.59E-01	1.65E-01	1.72E-01	1.80E-01	1.86E-01
6211.225	1.52E-01	1.58E-01	1.66E-01	1.74E-01	1.81E-01	1.88E-01
6211.175	1.53E-01	1.60E-01	1.66E-01	1.74E-01	1.82E-01	1.90E-01
6211.125	1.54E-01	1.60E-01	1.67E-01	1.74E-01	1.82E-01	1.91E-01
6211.075	1.55E-01	1.61E-01	1.67E-01	1.75E-01	1.83E-01	1.91E-01
6211.025	1.56E-01	1.62E-01	1.68E-01	1.75E-01	1.84E-01	1.92E-01
6210.975	1.58E-01	1.64E-01	1.69E-01	1.76E-01	1.84E-01	1.94E-01
6210.925	1.61E-01	1.66E-01	1.71E-01	1.78E-01	1.85E-01	1.94E-01
6210.875	1.63E-01	1.69E-01	1.74E-01	1.80E-01	1.87E-01	1.94E-01
6210.825	1.65E-01	1.71E-01	1.77E-01	1.83E-01	1.89E-01	1.96E-01
6210.775	1.66E-01	1.72E-01	1.79E-01	1.85E-01	1.91E-01	1.98E-01
6210.725	1.68E-01	1.73E-01	1.80E-01	1.86E-01	1.94E-01	2.00E-01
6210.675	1.70E-01	1.75E-01	1.81E-01	1.88E-01	1.95E-01	2.03E-01
6210.625	1.73E-01	1.77E-01	1.82E-01	1.87E-01	1.95E-01	2.03E-01
6210.575	1.74E-01	1.79E-01	1.83E-01	1.88E-01	1.94E-01	2.01E-01
6210.525	1.73E-01	1.81E-01	1.86E-01	1.90E-01	1.93E-01	2.00E-01
6210.475	1.71E-01	1.78E-01	1.86E-01	1.93E-01	1.97E-01	2.02E-01
6210.425	1.66E-01	1.75E-01	1.83E-01	1.91E-01	1.99E-01	2.06E-01
6210.375	1.62E-01	1.70E-01	1.78E-01	1.88E-01	1.97E-01	2.09E-01
6210.325	1.59E-01	1.67E-01	1.75E-01	1.85E-01	1.94E-01	2.07E-01
6210.275	1.58E-01	1.65E-01	1.73E-01	1.82E-01	1.92E-01	2.04E-01
6210.225	1.55E-01	1.63E-01	1.71E-01	1.80E-01	1.89E-01	2.00E-01
6210.175	1.52E-01	1.59E-01	1.68E-01	1.78E-01	1.88E-01	1.98E-01
6210.125	1.52E-01	1.58E-01	1.65E-01	1.74E-01	1.84E-01	1.95E-01
6210.075	1.56E-01	1.60E-01	1.66E-01	1.73E-01	1.81E-01	1.91E-01
6210.025	1.60E-01	1.65E-01	1.71E-01	1.77E-01	1.84E-01	1.92E-01
6209.975	1.61E-01	1.67E-01	1.74E-01	1.82E-01	1.89E-01	1.97E-01
6209.925	1.64E-01	1.70E-01	1.77E-01	1.84E-01	1.92E-01	2.01E-01
6209.875	1.67E-01	1.74E-01	1.81E-01	1.87E-01	1.95E-01	2.04E-01
6209.825	1.70E-01	1.76E-01	1.83E-01	1.91E-01	2.00E-01	2.09E-01
6209.775	1.73E-01	1.80E-01	1.87E-01	1.96E-01	2.05E-01	2.13E-01
6209.725	1.75E-01	1.82E-01	1.90E-01	1.99E-01	2.06E-01	2.14E-01
6209.675	1.74E-01	1.82E-01	1.89E-01	1.97E-01	2.05E-01	2.12E-01
6209.625	1.72E-01	1.79E-01	1.87E-01	1.95E-01	2.02E-01	2.11E-01
6209.575	1.66E-01	1.73E-01	1.80E-01	1.89E-01	1.98E-01	2.07E-01
6209.525	1.61E-01	1.68E-01	1.75E-01	1.83E-01	1.93E-01	2.02E-01
6209.475	1.58E-01	1.65E-01	1.71E-01	1.80E-01	1.88E-01	1.97E-01
6209.425	1.56E-01	1.62E-01	1.69E-01	1.77E-01	1.85E-01	1.95E-01
6209.375	1.55E-01	1.62E-01	1.69E-01	1.77E-01	1.87E-01	1.97E-01
6209.325	1.57E-01	1.64E-01	1.72E-01	1.80E-01	1.89E-01	1.99E-01
6209.275	1.60E-01	1.67E-01	1.75E-01	1.82E-01	1.90E-01	1.98E-01
6209.225	1.63E-01	1.69E-01	1.75E-01	1.82E-01	1.89E-01	1.96E-01
6209.175	1.64E-01	1.69E-01	1.75E-01	1.80E-01	1.87E-01	1.94E-01
6209.125	1.63E-01	1.67E-01	1.72E-01	1.79E-01	1.86E-01	1.94E-01



APPENDIX B Dispersion Modelling

6209.075	1.61E-01	1.65E-01	1.70E-01	1.78E-01	1.85E-01	1.93E-01
6209.025	1.58E-01	1.63E-01	1.69E-01	1.74E-01	1.80E-01	1.85E-01
6208.975	1.56E-01	1.60E-01	1.63E-01	1.67E-01	1.72E-01	1.77E-01
6208.925	1.51E-01	1.54E-01	1.57E-01	1.61E-01	1.66E-01	1.72E-01
6208.875	1.45E-01	1.48E-01	1.52E-01	1.56E-01	1.62E-01	1.68E-01
6208.825	1.40E-01	1.44E-01	1.49E-01	1.53E-01	1.58E-01	1.61E-01
6208.775	1.37E-01	1.41E-01	1.45E-01	1.49E-01	1.51E-01	1.53E-01
6208.725	1.34E-01	1.37E-01	1.40E-01	1.42E-01	1.44E-01	1.48E-01
6208.675	1.30E-01	1.32E-01	1.34E-01	1.36E-01	1.40E-01	1.44E-01
6208.625	1.25E-01	1.27E-01	1.30E-01	1.33E-01	1.38E-01	1.41E-01
6208.575	1.21E-01	1.24E-01	1.28E-01	1.31E-01	1.34E-01	1.37E-01
6208.525	1.19E-01	1.22E-01	1.26E-01	1.28E-01	1.31E-01	1.32E-01
6208.475	1.17E-01	1.20E-01	1.23E-01	1.25E-01	1.26E-01	1.27E-01
6208.425	1.15E-01	1.17E-01	1.19E-01	1.20E-01	1.21E-01	1.21E-01
6208.375	1.11E-01	1.13E-01	1.14E-01	1.16E-01	1.16E-01	1.15E-01
6208.325	1.08E-01	1.09E-01	1.10E-01	1.11E-01	1.10E-01	1.11E-01
6208.275	1.04E-01	1.05E-01	1.06E-01	1.06E-01	1.06E-01	1.08E-01
6208.225	1.01E-01	1.01E-01	1.01E-01	1.01E-01	1.04E-01	1.08E-01
6208.175	9.72E-02	9.69E-02	9.71E-02	9.92E-02	1.03E-01	1.07E-01
6208.125	9.31E-02	9.34E-02	9.49E-02	9.77E-02	1.01E-01	1.05E-01
6208.075	8.95E-02	9.10E-02	9.39E-02	9.71E-02	1.00E-01	1.04E-01
6208.025	8.68E-02	8.96E-02	9.34E-02	9.72E-02	1.00E-01	1.03E-01
6207.975	8.47E-02	8.84E-02	9.29E-02	9.69E-02	9.92E-02	1.02E-01
6207.925	8.31E-02	8.72E-02	9.24E-02	9.69E-02	9.97E-02	1.02E-01
6207.875	8.24E-02	8.70E-02	9.21E-02	9.63E-02	9.88E-02	1.01E-01
6207.825	8.25E-02	8.71E-02	9.11E-02	9.44E-02	9.72E-02	9.98E-02
6207.775	8.12E-02	8.60E-02	8.92E-02	9.23E-02	9.64E-02	1.00E-01
6207.725	7.97E-02	8.38E-02	8.74E-02	9.15E-02	9.59E-02	9.99E-02
6207.675	7.87E-02	8.12E-02	8.65E-02	9.14E-02	9.55E-02	9.91E-02
6207.625	7.65E-02	8.11E-02	8.65E-02	9.11E-02	9.49E-02	9.78E-02
6207.575	7.64E-02	8.20E-02	8.70E-02	9.06E-02	9.37E-02	9.58E-02
6207.525	7.61E-02	8.17E-02	8.66E-02	8.93E-02	9.05E-02	9.26E-02
6207.475	7.51E-02	8.06E-02	8.38E-02	8.59E-02	8.63E-02	9.07E-02
6207.425	7.31E-02	7.90E-02	8.07E-02	8.09E-02	8.32E-02	8.97E-02
6207.375	7.24E-02	7.61E-02	7.57E-02	7.76E-02	8.10E-02	8.71E-02

X (km): 615.075 615.125 615.175 615.225 615.275 615.325

Y (km)

6212.375	1.05E-01	1.03E-01	1.02E-01	1.01E-01	9.97E-02	9.93E-02
6212.325	1.08E-01	1.06E-01	1.05E-01	1.03E-01	1.03E-01	1.02E-01
6212.275	1.11E-01	1.09E-01	1.07E-01	1.06E-01	1.05E-01	1.04E-01
6212.225	1.15E-01	1.13E-01	1.11E-01	1.09E-01	1.08E-01	1.07E-01
6212.175	1.19E-01	1.17E-01	1.15E-01	1.13E-01	1.11E-01	1.10E-01
6212.125	1.23E-01	1.21E-01	1.18E-01	1.16E-01	1.14E-01	1.13E-01
6212.075	1.27E-01	1.25E-01	1.22E-01	1.20E-01	1.18E-01	1.16E-01
6212.025	1.32E-01	1.29E-01	1.26E-01	1.23E-01	1.21E-01	1.20E-01
6211.975	1.36E-01	1.34E-01	1.31E-01	1.27E-01	1.25E-01	1.23E-01
6211.925	1.40E-01	1.39E-01	1.36E-01	1.33E-01	1.30E-01	1.28E-01
6211.875	1.44E-01	1.43E-01	1.41E-01	1.38E-01	1.34E-01	1.32E-01
6211.825	1.49E-01	1.48E-01	1.47E-01	1.44E-01	1.40E-01	1.37E-01
6211.775	1.53E-01	1.52E-01	1.51E-01	1.49E-01	1.46E-01	1.42E-01
6211.725	1.58E-01	1.58E-01	1.57E-01	1.55E-01	1.52E-01	1.48E-01
6211.675	1.62E-01	1.62E-01	1.62E-01	1.60E-01	1.58E-01	1.54E-01
6211.625	1.66E-01	1.68E-01	1.68E-01	1.67E-01	1.65E-01	1.61E-01
6211.575	1.69E-01	1.72E-01	1.73E-01	1.73E-01	1.71E-01	1.68E-01
6211.525	1.73E-01	1.76E-01	1.78E-01	1.79E-01	1.78E-01	1.76E-01
6211.475	1.77E-01	1.80E-01	1.83E-01	1.85E-01	1.85E-01	1.83E-01
6211.425	1.81E-01	1.84E-01	1.87E-01	1.91E-01	1.91E-01	1.90E-01
6211.375	1.85E-01	1.89E-01	1.91E-01	1.95E-01	1.98E-01	1.98E-01
6211.325	1.88E-01	1.92E-01	1.96E-01	2.00E-01	2.04E-01	2.05E-01
6211.275	1.91E-01	1.96E-01	2.01E-01	2.06E-01	2.09E-01	2.12E-01
6211.225	1.95E-01	2.00E-01	2.06E-01	2.11E-01	2.14E-01	2.19E-01
6211.175	1.97E-01	2.04E-01	2.10E-01	2.15E-01	2.20E-01	2.25E-01
6211.125	2.00E-01	2.07E-01	2.14E-01	2.19E-01	2.26E-01	2.31E-01
6211.075	2.01E-01	2.10E-01	2.18E-01	2.24E-01	2.31E-01	2.38E-01
6211.025	2.02E-01	2.11E-01	2.20E-01	2.29E-01	2.35E-01	2.44E-01
6210.975	2.02E-01	2.13E-01	2.24E-01	2.32E-01	2.39E-01	2.49E-01
6210.925	2.03E-01	2.13E-01	2.24E-01	2.35E-01	2.43E-01	2.53E-01
6210.875	2.04E-01	2.13E-01	2.23E-01	2.37E-01	2.45E-01	2.53E-01



APPENDIX B Dispersion Modelling

6210.825	2.05E-01	2.12E-01	2.22E-01	2.38E-01	2.48E-01	2.56E-01
6210.775	2.05E-01	2.13E-01	2.22E-01	2.38E-01	2.50E-01	2.58E-01
6210.725	2.06E-01	2.12E-01	2.23E-01	2.38E-01	2.48E-01	2.60E-01
6210.675	2.09E-01	2.14E-01	2.20E-01	2.33E-01	2.47E-01	2.59E-01
6210.625	2.10E-01	2.17E-01	2.23E-01	2.32E-01	2.44E-01	2.58E-01
6210.575	2.10E-01	2.18E-01	2.24E-01	2.34E-01	2.45E-01	2.58E-01
6210.525	2.07E-01	2.16E-01	2.26E-01	2.36E-01	2.47E-01	2.61E-01
6210.475	2.07E-01	2.15E-01	2.25E-01	2.38E-01	2.49E-01	2.62E-01
6210.425	2.12E-01	2.18E-01	2.27E-01	2.37E-01	2.52E-01	2.65E-01
6210.375	2.18E-01	2.27E-01	2.36E-01	2.42E-01	2.55E-01	2.70E-01
6210.325	2.20E-01	2.33E-01	2.44E-01	2.54E-01	2.62E-01	2.72E-01
6210.275	2.18E-01	2.32E-01	2.46E-01	2.60E-01	2.71E-01	2.80E-01
6210.225	2.14E-01	2.28E-01	2.42E-01	2.58E-01	2.73E-01	2.84E-01
6210.175	2.10E-01	2.23E-01	2.37E-01	2.53E-01	2.68E-01	2.81E-01
6210.125	2.07E-01	2.19E-01	2.33E-01	2.50E-01	2.66E-01	2.80E-01
6210.075	2.03E-01	2.16E-01	2.30E-01	2.48E-01	2.64E-01	2.79E-01
6210.025	2.01E-01	2.13E-01	2.26E-01	2.43E-01	2.59E-01	2.78E-01
6209.975	2.06E-01	2.15E-01	2.26E-01	2.39E-01	2.56E-01	2.76E-01
6209.925	2.11E-01	2.21E-01	2.31E-01	2.43E-01	2.57E-01	2.73E-01
6209.875	2.13E-01	2.24E-01	2.35E-01	2.49E-01	2.63E-01	2.80E-01
6209.825	2.17E-01	2.27E-01	2.38E-01	2.51E-01	2.65E-01	2.80E-01
6209.775	2.21E-01	2.30E-01	2.40E-01	2.54E-01	2.68E-01	2.82E-01
6209.725	2.22E-01	2.31E-01	2.42E-01	2.54E-01	2.67E-01	2.83E-01
6209.675	2.21E-01	2.30E-01	2.41E-01	2.54E-01	2.67E-01	2.85E-01
6209.625	2.21E-01	2.30E-01	2.42E-01	2.54E-01	2.68E-01	2.86E-01
6209.575	2.17E-01	2.25E-01	2.35E-01	2.47E-01	2.61E-01	2.79E-01
6209.525	2.11E-01	2.18E-01	2.28E-01	2.39E-01	2.52E-01	2.70E-01
6209.475	2.06E-01	2.13E-01	2.23E-01	2.36E-01	2.51E-01	2.67E-01
6209.425	2.04E-01	2.14E-01	2.26E-01	2.40E-01	2.55E-01	2.72E-01
6209.375	2.07E-01	2.18E-01	2.30E-01	2.41E-01	2.54E-01	2.66E-01
6209.325	2.09E-01	2.18E-01	2.27E-01	2.38E-01	2.52E-01	2.65E-01
6209.275	2.07E-01	2.16E-01	2.26E-01	2.39E-01	2.54E-01	2.65E-01
6209.225	2.05E-01	2.14E-01	2.26E-01	2.38E-01	2.51E-01	2.63E-01
6209.175	2.03E-01	2.14E-01	2.26E-01	2.35E-01	2.44E-01	2.51E-01
6209.125	2.03E-01	2.11E-01	2.19E-01	2.26E-01	2.31E-01	2.37E-01
6209.075	1.99E-01	2.03E-01	2.08E-01	2.13E-01	2.18E-01	2.24E-01
6209.025	1.89E-01	1.94E-01	1.98E-01	2.03E-01	2.08E-01	2.11E-01
6208.975	1.82E-01	1.87E-01	1.92E-01	1.96E-01	1.96E-01	1.97E-01
6208.925	1.78E-01	1.82E-01	1.84E-01	1.86E-01	1.87E-01	1.88E-01
6208.875	1.72E-01	1.74E-01	1.75E-01	1.78E-01	1.80E-01	1.81E-01
6208.825	1.64E-01	1.66E-01	1.70E-01	1.72E-01	1.73E-01	1.73E-01
6208.775	1.57E-01	1.61E-01	1.65E-01	1.66E-01	1.64E-01	1.64E-01
6208.725	1.52E-01	1.57E-01	1.59E-01	1.59E-01	1.57E-01	1.56E-01
6208.675	1.48E-01	1.51E-01	1.53E-01	1.51E-01	1.49E-01	1.49E-01
6208.625	1.43E-01	1.45E-01	1.45E-01	1.44E-01	1.41E-01	1.43E-01
6208.575	1.37E-01	1.38E-01	1.37E-01	1.36E-01	1.36E-01	1.41E-01
6208.525	1.32E-01	1.32E-01	1.30E-01	1.31E-01	1.34E-01	1.41E-01
6208.475	1.26E-01	1.25E-01	1.25E-01	1.28E-01	1.34E-01	1.41E-01
6208.425	1.20E-01	1.20E-01	1.22E-01	1.28E-01	1.34E-01	1.40E-01
6208.375	1.15E-01	1.18E-01	1.22E-01	1.28E-01	1.33E-01	1.38E-01
6208.325	1.13E-01	1.17E-01	1.22E-01	1.27E-01	1.31E-01	1.36E-01
6208.275	1.12E-01	1.17E-01	1.22E-01	1.24E-01	1.27E-01	1.30E-01
6208.225	1.12E-01	1.17E-01	1.20E-01	1.21E-01	1.22E-01	1.24E-01
6208.175	1.11E-01	1.16E-01	1.18E-01	1.19E-01	1.21E-01	1.23E-01
6208.125	1.10E-01	1.12E-01	1.14E-01	1.16E-01	1.18E-01	1.22E-01
6208.075	1.06E-01	1.08E-01	1.11E-01	1.14E-01	1.15E-01	1.19E-01
6208.025	1.05E-01	1.08E-01	1.12E-01	1.16E-01	1.18E-01	1.21E-01
6207.975	1.05E-01	1.08E-01	1.12E-01	1.16E-01	1.19E-01	1.23E-01
6207.925	1.04E-01	1.07E-01	1.11E-01	1.15E-01	1.18E-01	1.22E-01
6207.875	1.03E-01	1.05E-01	1.08E-01	1.11E-01	1.15E-01	1.19E-01
6207.825	1.02E-01	1.04E-01	1.06E-01	1.09E-01	1.14E-01	1.16E-01
6207.775	1.03E-01	1.05E-01	1.06E-01	1.10E-01	1.14E-01	1.15E-01
6207.725	1.03E-01	1.05E-01	1.07E-01	1.11E-01	1.13E-01	1.11E-01
6207.675	1.02E-01	1.04E-01	1.07E-01	1.11E-01	1.11E-01	1.09E-01
6207.625	1.00E-01	1.03E-01	1.07E-01	1.10E-01	1.09E-01	1.06E-01
6207.575	9.86E-02	1.02E-01	1.05E-01	1.07E-01	1.05E-01	1.01E-01
6207.525	9.71E-02	1.01E-01	1.05E-01	1.04E-01	1.01E-01	9.80E-02
6207.475	9.58E-02	1.00E-01	1.02E-01	1.00E-01	9.72E-02	9.43E-02
6207.425	9.49E-02	9.77E-02	9.75E-02	9.54E-02	9.30E-02	9.08E-02
6207.375	9.23E-02	9.40E-02	9.21E-02	9.14E-02	8.96E-02	8.56E-02



APPENDIX B Dispersion Modelling

X (km): 615.375 615.425 615.475 615.525 615.575 615.625

Y (km)						
6212.375	9.97E-02	1.00E-01	1.02E-01	1.03E-01	1.04E-01	1.05E-01
6212.325	1.02E-01	1.03E-01	1.04E-01	1.05E-01	1.07E-01	1.07E-01
6212.275	1.04E-01	1.04E-01	1.05E-01	1.07E-01	1.08E-01	1.09E-01
6212.225	1.06E-01	1.07E-01	1.07E-01	1.09E-01	1.10E-01	1.11E-01
6212.175	1.10E-01	1.10E-01	1.10E-01	1.11E-01	1.13E-01	1.14E-01
6212.125	1.12E-01	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.17E-01
6212.075	1.15E-01	1.15E-01	1.15E-01	1.16E-01	1.18E-01	1.19E-01
6212.025	1.19E-01	1.18E-01	1.18E-01	1.19E-01	1.20E-01	1.22E-01
6211.975	1.22E-01	1.21E-01	1.21E-01	1.22E-01	1.23E-01	1.25E-01
6211.925	1.26E-01	1.25E-01	1.24E-01	1.25E-01	1.26E-01	1.28E-01
6211.875	1.30E-01	1.29E-01	1.28E-01	1.28E-01	1.30E-01	1.31E-01
6211.825	1.35E-01	1.33E-01	1.31E-01	1.32E-01	1.33E-01	1.34E-01
6211.775	1.39E-01	1.37E-01	1.36E-01	1.36E-01	1.36E-01	1.38E-01
6211.725	1.44E-01	1.42E-01	1.41E-01	1.40E-01	1.41E-01	1.41E-01
6211.675	1.50E-01	1.48E-01	1.45E-01	1.44E-01	1.44E-01	1.46E-01
6211.625	1.56E-01	1.53E-01	1.51E-01	1.49E-01	1.49E-01	1.49E-01
6211.575	1.64E-01	1.60E-01	1.57E-01	1.55E-01	1.54E-01	1.54E-01
6211.525	1.72E-01	1.67E-01	1.63E-01	1.60E-01	1.59E-01	1.59E-01
6211.475	1.79E-01	1.75E-01	1.71E-01	1.67E-01	1.65E-01	1.65E-01
6211.425	1.87E-01	1.84E-01	1.78E-01	1.75E-01	1.72E-01	1.70E-01
6211.375	1.96E-01	1.92E-01	1.87E-01	1.82E-01	1.79E-01	1.78E-01
6211.325	2.04E-01	2.02E-01	1.96E-01	1.91E-01	1.87E-01	1.85E-01
6211.275	2.13E-01	2.11E-01	2.06E-01	2.01E-01	1.96E-01	1.92E-01
6211.225	2.21E-01	2.20E-01	2.17E-01	2.11E-01	2.06E-01	2.01E-01
6211.175	2.28E-01	2.30E-01	2.27E-01	2.22E-01	2.17E-01	2.11E-01
6211.125	2.36E-01	2.39E-01	2.38E-01	2.34E-01	2.28E-01	2.21E-01
6211.075	2.43E-01	2.48E-01	2.48E-01	2.46E-01	2.39E-01	2.32E-01
6211.025	2.49E-01	2.56E-01	2.58E-01	2.57E-01	2.51E-01	2.44E-01
6210.975	2.56E-01	2.63E-01	2.68E-01	2.68E-01	2.64E-01	2.58E-01
6210.925	2.63E-01	2.70E-01	2.77E-01	2.79E-01	2.77E-01	2.69E-01
6210.875	2.64E-01	2.73E-01	2.83E-01	2.89E-01	2.89E-01	2.81E-01
6210.825	2.66E-01	2.76E-01	2.88E-01	2.97E-01	3.03E-01	2.96E-01
6210.775	2.67E-01	2.79E-01	2.93E-01	3.05E-01	3.12E-01	3.11E-01
6210.725	2.66E-01	2.82E-01	2.96E-01	3.09E-01	3.21E-01	3.24E-01
6210.675	2.71E-01	2.84E-01	2.98E-01	3.13E-01	3.28E-01	3.34E-01
6210.625	2.73E-01	2.87E-01	3.02E-01	3.17E-01	3.31E-01	3.45E-01
6210.575	2.74E-01	2.92E-01	3.08E-01	3.22E-01	3.36E-01	3.51E-01
6210.525	2.76E-01	2.93E-01	3.11E-01	3.28E-01	3.42E-01	3.57E-01
6210.475	2.77E-01	2.96E-01	3.16E-01	3.36E-01	3.52E-01	3.67E-01
6210.425	2.80E-01	2.98E-01	3.18E-01	3.40E-01	3.64E-01	3.81E-01
6210.375	2.84E-01	3.00E-01	3.23E-01	3.51E-01	3.75E-01	3.97E-01
6210.325	2.87E-01	3.06E-01	3.30E-01	3.58E-01	3.83E-01	4.15E-01
6210.275	2.93E-01	3.10E-01	3.37E-01	3.61E-01	3.92E-01	4.30E-01
6210.225	2.97E-01	3.15E-01	3.37E-01	3.64E-01	3.86E-01	4.20E-01
6210.175	2.96E-01	3.12E-01	3.29E-01	3.54E-01	3.77E-01	4.09E-01
6210.125	2.97E-01	3.15E-01	3.31E-01	3.49E-01	3.72E-01	4.05E-01
6210.075	2.98E-01	3.20E-01	3.40E-01	3.61E-01	3.81E-01	4.08E-01
6210.025	2.97E-01	3.21E-01	3.46E-01	3.74E-01	3.99E-01	4.25E-01
6209.975	2.96E-01	3.19E-01	3.45E-01	3.77E-01	4.10E-01	4.45E-01
6209.925	2.92E-01	3.15E-01	3.44E-01	3.74E-01	4.10E-01	4.54E-01
6209.875	2.96E-01	3.14E-01	3.36E-01	3.67E-01	4.04E-01	4.45E-01
6209.825	3.00E-01	3.21E-01	3.43E-01	3.67E-01	3.96E-01	4.35E-01
6209.775	3.01E-01	3.20E-01	3.42E-01	3.68E-01	3.98E-01	4.36E-01
6209.725	3.00E-01	3.18E-01	3.37E-01	3.62E-01	3.93E-01	4.26E-01
6209.675	3.03E-01	3.24E-01	3.45E-01	3.71E-01	4.02E-01	4.37E-01
6209.625	3.05E-01	3.27E-01	3.52E-01	3.80E-01	4.12E-01	4.50E-01
6209.575	2.97E-01	3.18E-01	3.42E-01	3.70E-01	4.02E-01	4.40E-01
6209.525	2.88E-01	3.08E-01	3.32E-01	3.58E-01	3.87E-01	4.15E-01
6209.475	2.88E-01	3.07E-01	3.27E-01	3.44E-01	3.65E-01	3.95E-01
6209.425	2.86E-01	3.02E-01	3.18E-01	3.40E-01	3.63E-01	3.89E-01
6209.375	2.82E-01	2.99E-01	3.17E-01	3.37E-01	3.56E-01	3.72E-01
6209.325	2.81E-01	2.97E-01	3.12E-01	3.27E-01	3.39E-01	3.51E-01
6209.275	2.77E-01	2.89E-01	3.02E-01	3.10E-01	3.13E-01	3.21E-01
6209.225	2.69E-01	2.75E-01	2.84E-01	2.87E-01	2.96E-01	3.02E-01
6209.175	2.55E-01	2.61E-01	2.67E-01	2.71E-01	2.73E-01	2.73E-01
6209.125	2.42E-01	2.49E-01	2.50E-01	2.48E-01	2.49E-01	2.58E-01
6209.075	2.29E-01	2.29E-01	2.29E-01	2.33E-01	2.36E-01	2.43E-01



APPENDIX B Dispersion Modelling

6209.025	2.12E-01	2.13E-01	2.16E-01	2.20E-01	2.24E-01	2.28E-01
6208.975	1.99E-01	2.02E-01	2.05E-01	2.08E-01	2.10E-01	2.11E-01
6208.925	1.90E-01	1.92E-01	1.95E-01	1.96E-01	1.97E-01	2.06E-01
6208.875	1.81E-01	1.83E-01	1.84E-01	1.85E-01	1.92E-01	2.05E-01
6208.825	1.73E-01	1.74E-01	1.73E-01	1.78E-01	1.93E-01	2.10E-01
6208.775	1.64E-01	1.63E-01	1.68E-01	1.77E-01	1.92E-01	2.07E-01
6208.725	1.56E-01	1.58E-01	1.66E-01	1.79E-01	1.90E-01	2.07E-01
6208.675	1.52E-01	1.59E-01	1.69E-01	1.78E-01	1.90E-01	2.07E-01
6208.625	1.50E-01	1.60E-01	1.71E-01	1.81E-01	1.92E-01	2.06E-01
6208.575	1.50E-01	1.59E-01	1.69E-01	1.81E-01	1.94E-01	2.05E-01
6208.525	1.49E-01	1.58E-01	1.69E-01	1.82E-01	1.92E-01	2.03E-01
6208.475	1.48E-01	1.57E-01	1.69E-01	1.80E-01	1.88E-01	1.98E-01
6208.425	1.46E-01	1.58E-01	1.73E-01	1.80E-01	1.86E-01	1.93E-01
6208.375	1.45E-01	1.58E-01	1.72E-01	1.80E-01	1.87E-01	1.88E-01
6208.325	1.43E-01	1.53E-01	1.65E-01	1.74E-01	1.81E-01	1.80E-01
6208.275	1.35E-01	1.46E-01	1.56E-01	1.66E-01	1.68E-01	1.67E-01
6208.225	1.30E-01	1.39E-01	1.49E-01	1.56E-01	1.55E-01	1.54E-01
6208.175	1.27E-01	1.35E-01	1.44E-01	1.46E-01	1.44E-01	1.41E-01
6208.125	1.25E-01	1.32E-01	1.38E-01	1.38E-01	1.34E-01	1.31E-01
6208.075	1.25E-01	1.33E-01	1.33E-01	1.31E-01	1.27E-01	1.26E-01
6208.025	1.28E-01	1.32E-01	1.28E-01	1.24E-01	1.21E-01	1.19E-01
6207.975	1.28E-01	1.28E-01	1.21E-01	1.17E-01	1.15E-01	1.15E-01
6207.925	1.25E-01	1.21E-01	1.15E-01	1.13E-01	1.12E-01	1.12E-01
6207.875	1.19E-01	1.16E-01	1.11E-01	1.09E-01	1.09E-01	1.10E-01
6207.825	1.15E-01	1.12E-01	1.09E-01	1.07E-01	1.07E-01	1.07E-01
6207.775	1.12E-01	1.09E-01	1.08E-01	1.07E-01	1.07E-01	1.08E-01
6207.725	1.09E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01
6207.675	1.06E-01	1.05E-01	1.05E-01	1.05E-01	1.06E-01	1.06E-01
6207.625	1.03E-01	1.01E-01	1.02E-01	1.03E-01	1.04E-01	1.03E-01
6207.575	9.90E-02	9.85E-02	9.91E-02	9.89E-02	9.92E-02	9.90E-02
6207.525	9.53E-02	9.58E-02	9.67E-02	9.53E-02	9.26E-02	9.22E-02
6207.475	9.19E-02	9.29E-02	9.41E-02	9.11E-02	8.74E-02	8.69E-02
6207.425	8.84E-02	8.86E-02	8.98E-02	8.76E-02	8.42E-02	8.31E-02
6207.375	8.35E-02	8.52E-02	8.67E-02	8.48E-02	8.12E-02	7.90E-02

X (km): 615.675 615.725 615.775 615.825 615.875 615.925

Y (km)

6212.375	1.04E-01	1.03E-01	1.02E-01	1.00E-01	1.00E-01	1.00E-01
6212.325	1.07E-01	1.06E-01	1.05E-01	1.03E-01	1.03E-01	1.03E-01
6212.275	1.09E-01	1.08E-01	1.07E-01	1.06E-01	1.05E-01	1.06E-01
6212.225	1.12E-01	1.11E-01	1.09E-01	1.08E-01	1.08E-01	1.08E-01
6212.175	1.14E-01	1.14E-01	1.11E-01	1.10E-01	1.10E-01	1.10E-01
6212.125	1.17E-01	1.17E-01	1.15E-01	1.12E-01	1.11E-01	1.12E-01
6212.075	1.20E-01	1.20E-01	1.19E-01	1.16E-01	1.14E-01	1.14E-01
6212.025	1.24E-01	1.24E-01	1.23E-01	1.20E-01	1.17E-01	1.17E-01
6211.975	1.26E-01	1.27E-01	1.26E-01	1.24E-01	1.22E-01	1.21E-01
6211.925	1.30E-01	1.30E-01	1.30E-01	1.28E-01	1.26E-01	1.25E-01
6211.875	1.33E-01	1.34E-01	1.34E-01	1.33E-01	1.30E-01	1.29E-01
6211.825	1.37E-01	1.38E-01	1.39E-01	1.37E-01	1.35E-01	1.33E-01
6211.775	1.40E-01	1.42E-01	1.43E-01	1.42E-01	1.39E-01	1.38E-01
6211.725	1.43E-01	1.46E-01	1.47E-01	1.47E-01	1.44E-01	1.42E-01
6211.675	1.48E-01	1.50E-01	1.52E-01	1.52E-01	1.49E-01	1.47E-01
6211.625	1.52E-01	1.54E-01	1.56E-01	1.57E-01	1.55E-01	1.51E-01
6211.575	1.55E-01	1.59E-01	1.61E-01	1.62E-01	1.60E-01	1.57E-01
6211.525	1.60E-01	1.62E-01	1.65E-01	1.67E-01	1.67E-01	1.63E-01
6211.475	1.65E-01	1.68E-01	1.71E-01	1.73E-01	1.73E-01	1.69E-01
6211.425	1.71E-01	1.73E-01	1.76E-01	1.79E-01	1.79E-01	1.77E-01
6211.375	1.77E-01	1.78E-01	1.81E-01	1.84E-01	1.86E-01	1.84E-01
6211.325	1.84E-01	1.84E-01	1.87E-01	1.90E-01	1.93E-01	1.91E-01
6211.275	1.91E-01	1.91E-01	1.93E-01	1.96E-01	1.99E-01	1.99E-01
6211.225	1.99E-01	1.98E-01	1.99E-01	2.03E-01	2.06E-01	2.07E-01
6211.175	2.08E-01	2.07E-01	2.07E-01	2.09E-01	2.13E-01	2.15E-01
6211.125	2.17E-01	2.16E-01	2.14E-01	2.16E-01	2.19E-01	2.24E-01
6211.075	2.28E-01	2.26E-01	2.24E-01	2.25E-01	2.27E-01	2.32E-01
6211.025	2.39E-01	2.36E-01	2.36E-01	2.34E-01	2.35E-01	2.37E-01
6210.975	2.51E-01	2.46E-01	2.45E-01	2.44E-01	2.44E-01	2.45E-01
6210.925	2.63E-01	2.59E-01	2.58E-01	2.56E-01	2.54E-01	2.51E-01
6210.875	2.74E-01	2.69E-01	2.68E-01	2.66E-01	2.62E-01	2.59E-01
6210.825	2.84E-01	2.82E-01	2.80E-01	2.76E-01	2.71E-01	2.68E-01



APPENDIX B Dispersion Modelling

6210.775	3.01E-01	2.95E-01	2.90E-01	2.88E-01	2.82E-01	2.81E-01
6210.725	3.20E-01	3.12E-01	3.04E-01	3.01E-01	2.97E-01	2.93E-01
6210.675	3.37E-01	3.29E-01	3.25E-01	3.19E-01	3.16E-01	3.12E-01
6210.625	3.50E-01	3.50E-01	3.46E-01	3.41E-01	3.36E-01	3.35E-01
6210.575	3.63E-01	3.71E-01	3.69E-01	3.67E-01	3.64E-01	3.66E-01
6210.525	3.75E-01	3.87E-01	3.93E-01	3.90E-01	3.83E-01	3.91E-01
6210.475	3.86E-01	4.02E-01	4.15E-01	4.16E-01	4.13E-01	4.17E-01
6210.425	3.94E-01	4.16E-01	4.35E-01	4.43E-01	4.41E-01	4.43E-01
6210.375	4.12E-01	4.32E-01	4.54E-01	4.70E-01	4.75E-01	4.77E-01
6210.325	4.39E-01	4.52E-01	4.72E-01	4.95E-01	5.04E-01	5.14E-01
6210.275	4.68E-01	4.85E-01	4.97E-01	5.19E-01	5.35E-01	5.49E-01
6210.225	4.64E-01	5.06E-01	5.23E-01	5.44E-01	5.71E-01	5.81E-01
6210.175	4.51E-01	5.09E-01	5.62E-01	5.80E-01	6.08E-01	6.19E-01
6210.125	4.46E-01	5.02E-01	5.82E-01	6.33E-01	6.62E-01	6.84E-01
6210.075	4.49E-01	4.95E-01	5.72E-01	6.64E-01	7.26E-01	7.61E-01
6210.025	4.53E-01	5.02E-01	5.57E-01	6.54E-01	7.73E-01	8.17E-01
6209.975	4.76E-01	5.14E-01	5.71E-01	6.42E-01	7.67E-01	8.87E-01
6209.925	4.96E-01	5.51E-01	5.93E-01	6.58E-01	7.72E-01	9.32E-01
6209.875	4.95E-01	5.58E-01	6.29E-01	6.83E-01	7.82E-01	9.27E-01
6209.825	4.86E-01	5.41E-01	6.11E-01	6.94E-01	7.84E-01	9.22E-01
6209.775	4.70E-01	5.09E-01	5.79E-01	6.73E-01	7.66E-01	8.96E-01
6209.725	4.65E-01	5.17E-01	5.61E-01	6.52E-01	7.47E-01	8.84E-01
6209.675	4.81E-01	5.26E-01	5.76E-01	6.60E-01	7.50E-01	8.72E-01
6209.625	4.94E-01	5.47E-01	6.09E-01	6.77E-01	7.49E-01	8.48E-01
6209.575	4.80E-01	5.27E-01	5.86E-01	6.36E-01	7.08E-01	7.90E-01
6209.525	4.46E-01	4.82E-01	5.29E-01	5.90E-01	6.40E-01	7.15E-01
6209.475	4.25E-01	4.59E-01	5.07E-01	5.59E-01	6.15E-01	6.74E-01
6209.425	4.18E-01	4.49E-01	4.86E-01	5.25E-01	5.56E-01	5.74E-01
6209.375	3.97E-01	4.15E-01	4.33E-01	4.60E-01	4.77E-01	4.89E-01
6209.325	3.62E-01	3.75E-01	3.90E-01	4.00E-01	4.33E-01	4.45E-01
6209.275	3.35E-01	3.37E-01	3.46E-01	3.72E-01	3.98E-01	4.13E-01
6209.225	3.01E-01	3.12E-01	3.22E-01	3.40E-01	3.63E-01	3.95E-01
6209.175	2.81E-01	2.92E-01	3.02E-01	3.10E-01	3.49E-01	3.94E-01
6209.125	2.64E-01	2.72E-01	2.77E-01	3.07E-01	3.48E-01	3.94E-01
6209.075	2.47E-01	2.50E-01	2.72E-01	3.05E-01	3.53E-01	3.84E-01
6209.025	2.30E-01	2.45E-01	2.71E-01	3.07E-01	3.44E-01	3.63E-01
6208.975	2.22E-01	2.45E-01	2.69E-01	3.09E-01	3.41E-01	3.37E-01
6208.925	2.23E-01	2.42E-01	2.73E-01	3.03E-01	3.23E-01	3.15E-01
6208.875	2.24E-01	2.45E-01	2.73E-01	2.99E-01	3.01E-01	2.96E-01
6208.825	2.24E-01	2.48E-01	2.71E-01	2.87E-01	2.82E-01	2.83E-01
6208.775	2.29E-01	2.48E-01	2.69E-01	2.72E-01	2.69E-01	2.71E-01
6208.725	2.28E-01	2.48E-01	2.62E-01	2.59E-01	2.59E-01	2.61E-01
6208.675	2.25E-01	2.45E-01	2.47E-01	2.44E-01	2.46E-01	2.48E-01
6208.625	2.23E-01	2.34E-01	2.22E-01	2.17E-01	2.20E-01	2.26E-01
6208.575	2.22E-01	2.25E-01	2.14E-01	2.01E-01	1.97E-01	2.02E-01
6208.525	2.11E-01	2.12E-01	2.05E-01	2.01E-01	1.85E-01	1.77E-01
6208.475	1.94E-01	1.91E-01	1.90E-01	1.89E-01	1.74E-01	1.60E-01
6208.425	1.86E-01	1.74E-01	1.69E-01	1.65E-01	1.58E-01	1.47E-01
6208.375	1.85E-01	1.75E-01	1.68E-01	1.57E-01	1.47E-01	1.39E-01
6208.325	1.76E-01	1.71E-01	1.68E-01	1.55E-01	1.41E-01	1.32E-01
6208.275	1.64E-01	1.62E-01	1.60E-01	1.49E-01	1.31E-01	1.19E-01
6208.225	1.52E-01	1.50E-01	1.45E-01	1.39E-01	1.24E-01	1.12E-01
6208.175	1.36E-01	1.36E-01	1.33E-01	1.29E-01	1.22E-01	1.17E-01
6208.125	1.30E-01	1.27E-01	1.26E-01	1.22E-01	1.17E-01	1.13E-01
6208.075	1.25E-01	1.23E-01	1.20E-01	1.17E-01	1.12E-01	1.10E-01
6208.025	1.20E-01	1.18E-01	1.15E-01	1.13E-01	1.08E-01	1.06E-01
6207.975	1.15E-01	1.15E-01	1.13E-01	1.10E-01	1.06E-01	1.03E-01
6207.925	1.14E-01	1.13E-01	1.11E-01	1.07E-01	1.05E-01	1.01E-01
6207.875	1.11E-01	1.10E-01	1.09E-01	1.06E-01	1.04E-01	1.00E-01
6207.825	1.08E-01	1.09E-01	1.06E-01	1.05E-01	1.03E-01	1.02E-01
6207.775	1.09E-01	1.08E-01	1.05E-01	1.03E-01	1.03E-01	1.01E-01
6207.725	1.08E-01	1.06E-01	1.01E-01	1.00E-01	9.92E-02	9.80E-02
6207.675	1.05E-01	1.02E-01	9.60E-02	9.60E-02	9.60E-02	9.47E-02
6207.625	1.02E-01	9.91E-02	9.80E-02	9.62E-02	9.48E-02	9.26E-02
6207.575	9.79E-02	9.82E-02	9.89E-02	9.93E-02	9.70E-02	9.59E-02
6207.525	9.38E-02	9.56E-02	9.66E-02	9.85E-02	9.95E-02	9.69E-02
6207.475	9.00E-02	9.39E-02	9.51E-02	9.72E-02	9.87E-02	9.59E-02
6207.425	8.58E-02	9.10E-02	9.31E-02	9.52E-02	9.58E-02	9.20E-02
6207.375	8.19E-02	8.67E-02	8.99E-02	9.19E-02	9.09E-02	8.74E-02



APPENDIX B Dispersion Modelling

X (km): 615.975 616.025 616.075 616.125 616.175 616.225

Y (km)						
6212.375	1.00E-01	1.00E-01	9.85E-02	9.72E-02	9.64E-02	9.59E-02
6212.325	1.03E-01	1.02E-01	1.01E-01	9.95E-02	9.88E-02	9.84E-02
6212.275	1.06E-01	1.05E-01	1.03E-01	1.02E-01	1.01E-01	1.01E-01
6212.225	1.08E-01	1.07E-01	1.06E-01	1.04E-01	1.04E-01	1.04E-01
6212.175	1.10E-01	1.09E-01	1.09E-01	1.07E-01	1.07E-01	1.06E-01
6212.125	1.11E-01	1.12E-01	1.11E-01	1.11E-01	1.10E-01	1.09E-01
6212.075	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.13E-01	1.12E-01
6212.025	1.17E-01	1.17E-01	1.17E-01	1.16E-01	1.15E-01	1.15E-01
6211.975	1.20E-01	1.20E-01	1.19E-01	1.19E-01	1.18E-01	1.18E-01
6211.925	1.25E-01	1.24E-01	1.22E-01	1.20E-01	1.20E-01	1.20E-01
6211.875	1.29E-01	1.28E-01	1.27E-01	1.25E-01	1.22E-01	1.22E-01
6211.825	1.34E-01	1.33E-01	1.32E-01	1.30E-01	1.27E-01	1.25E-01
6211.775	1.38E-01	1.37E-01	1.36E-01	1.34E-01	1.32E-01	1.30E-01
6211.725	1.42E-01	1.42E-01	1.41E-01	1.39E-01	1.36E-01	1.33E-01
6211.675	1.46E-01	1.46E-01	1.45E-01	1.43E-01	1.41E-01	1.37E-01
6211.625	1.51E-01	1.50E-01	1.50E-01	1.48E-01	1.46E-01	1.43E-01
6211.575	1.56E-01	1.55E-01	1.55E-01	1.53E-01	1.52E-01	1.49E-01
6211.525	1.62E-01	1.60E-01	1.59E-01	1.58E-01	1.57E-01	1.55E-01
6211.475	1.68E-01	1.66E-01	1.65E-01	1.63E-01	1.63E-01	1.61E-01
6211.425	1.74E-01	1.73E-01	1.70E-01	1.69E-01	1.68E-01	1.67E-01
6211.375	1.80E-01	1.79E-01	1.76E-01	1.73E-01	1.72E-01	1.71E-01
6211.325	1.87E-01	1.85E-01	1.81E-01	1.77E-01	1.73E-01	1.75E-01
6211.275	1.95E-01	1.92E-01	1.86E-01	1.81E-01	1.79E-01	1.81E-01
6211.225	2.03E-01	2.00E-01	1.96E-01	1.92E-01	1.89E-01	1.88E-01
6211.175	2.12E-01	2.10E-01	2.07E-01	2.03E-01	2.00E-01	2.00E-01
6211.125	2.22E-01	2.19E-01	2.16E-01	2.13E-01	2.11E-01	2.12E-01
6211.075	2.30E-01	2.27E-01	2.24E-01	2.22E-01	2.22E-01	2.24E-01
6211.025	2.38E-01	2.36E-01	2.33E-01	2.31E-01	2.31E-01	2.32E-01
6210.975	2.46E-01	2.44E-01	2.40E-01	2.37E-01	2.36E-01	2.37E-01
6210.925	2.49E-01	2.48E-01	2.45E-01	2.41E-01	2.39E-01	2.41E-01
6210.875	2.57E-01	2.54E-01	2.53E-01	2.48E-01	2.47E-01	2.49E-01
6210.825	2.68E-01	2.67E-01	2.63E-01	2.56E-01	2.55E-01	2.56E-01
6210.775	2.81E-01	2.80E-01	2.76E-01	2.69E-01	2.65E-01	2.66E-01
6210.725	2.95E-01	2.97E-01	2.90E-01	2.83E-01	2.78E-01	2.78E-01
6210.675	3.11E-01	3.14E-01	3.08E-01	2.97E-01	2.93E-01	2.94E-01
6210.625	3.33E-01	3.38E-01	3.33E-01	3.19E-01	3.13E-01	3.08E-01
6210.575	3.65E-01	3.69E-01	3.65E-01	3.50E-01	3.39E-01	3.28E-01
6210.525	3.99E-01	4.01E-01	3.97E-01	3.82E-01	3.65E-01	3.54E-01
6210.475	4.25E-01	4.34E-01	4.34E-01	4.21E-01	3.93E-01	3.80E-01
6210.425	4.53E-01	4.65E-01	4.69E-01	4.55E-01	4.24E-01	4.08E-01
6210.375	4.91E-01	5.02E-01	5.03E-01	4.86E-01	4.58E-01	4.33E-01
6210.325	5.30E-01	5.40E-01	5.33E-01	5.22E-01	4.95E-01	4.78E-01
6210.275	5.72E-01	5.86E-01	5.83E-01	5.67E-01	5.55E-01	5.24E-01
6210.225	6.16E-01	6.50E-01	6.59E-01	6.40E-01	6.33E-01	5.91E-01
6210.175	6.44E-01	7.02E-01	7.50E-01	7.25E-01	6.91E-01	6.79E-01
6210.125	6.77E-01	7.60E-01	8.52E-01	8.38E-01	8.06E-01	7.75E-01
6210.075	7.54E-01	8.12E-01	9.33E-01	1.01E+00	9.48E-01	9.24E-01
6210.025	8.66E-01	8.77E-01	9.89E-01	1.18E+00	1.19E+00	1.10E+00
6209.975	9.58E-01	1.02E+00	1.07E+00	1.27E+00	1.56E+00	1.37E+00
6209.925	1.05E+00	1.13E+00	1.18E+00	1.33E+00	1.63E+00	1.73E+00
6209.875	1.14E+00	1.29E+00	1.36E+00	1.47E+00	1.56E+00	1.71E+00
6209.825	1.15E+00	1.41E+00	1.60E+00	2.53E+00	2.46E+00	2.25E+00
6209.775	1.10E+00	1.79E+00	2.61E+00	2.86E+00	2.58E+00	1.96E+00
6209.725	1.09E+00	2.13E+00	2.37E+00	2.73E+00	2.48E+00	2.06E+00
6209.675	1.03E+00	1.74E+00	1.83E+00	2.50E+00	2.75E+00	2.20E+00
6209.625	9.77E-01	1.25E+00	1.40E+00	1.90E+00	3.16E+00	2.55E+00
6209.575	8.64E-01	1.03E+00	1.14E+00	1.05E+00	9.56E-01	1.36E+00
6209.525	7.99E-01	8.77E-01	8.67E-01	7.60E-01	6.40E-01	6.83E-01
6209.475	7.06E-01	6.99E-01	6.50E-01	6.44E-01	5.74E-01	6.50E-01
6209.425	5.71E-01	5.65E-01	6.10E-01	6.45E-01	6.41E-01	6.29E-01
6209.375	4.85E-01	5.30E-01	5.90E-01	6.28E-01	6.37E-01	6.07E-01
6209.325	4.70E-01	5.23E-01	5.84E-01	6.08E-01	6.01E-01	5.82E-01
6209.275	4.55E-01	5.13E-01	5.52E-01	5.53E-01	5.36E-01	5.63E-01
6209.225	4.58E-01	4.83E-01	5.06E-01	5.20E-01	4.99E-01	5.16E-01
6209.175	4.42E-01	4.53E-01	4.61E-01	4.74E-01	4.57E-01	4.64E-01
6209.125	4.14E-01	4.19E-01	4.21E-01	4.23E-01	4.08E-01	4.07E-01
6209.075	3.87E-01	3.87E-01	3.86E-01	3.81E-01	3.70E-01	3.62E-01
6209.025	3.59E-01	3.59E-01	3.58E-01	3.60E-01	3.44E-01	3.25E-01



APPENDIX B Dispersion Modelling

6208.975	3.36E-01	3.38E-01	3.39E-01	3.36E-01	3.21E-01	2.98E-01
6208.925	3.19E-01	3.19E-01	3.22E-01	3.19E-01	3.00E-01	2.76E-01
6208.875	3.00E-01	3.02E-01	3.07E-01	2.96E-01	2.75E-01	2.49E-01
6208.825	2.85E-01	2.88E-01	2.91E-01	2.65E-01	2.30E-01	2.08E-01
6208.775	2.72E-01	2.77E-01	2.76E-01	2.55E-01	2.20E-01	1.80E-01
6208.725	2.63E-01	2.66E-01	2.63E-01	2.40E-01	2.04E-01	1.70E-01
6208.675	2.50E-01	2.47E-01	2.35E-01	2.11E-01	1.81E-01	1.54E-01
6208.625	2.30E-01	2.25E-01	2.04E-01	1.82E-01	1.52E-01	1.22E-01
6208.575	2.08E-01	2.05E-01	1.80E-01	1.56E-01	1.28E-01	1.15E-01
6208.525	1.88E-01	1.87E-01	1.66E-01	1.37E-01	1.18E-01	1.12E-01
6208.475	1.65E-01	1.67E-01	1.59E-01	1.31E-01	1.11E-01	1.06E-01
6208.425	1.46E-01	1.46E-01	1.43E-01	1.23E-01	1.05E-01	1.02E-01
6208.375	1.37E-01	1.31E-01	1.22E-01	1.14E-01	1.00E-01	9.74E-02
6208.325	1.25E-01	1.24E-01	1.13E-01	1.07E-01	9.62E-02	9.36E-02
6208.275	1.19E-01	1.16E-01	1.08E-01	1.01E-01	9.26E-02	9.04E-02
6208.225	1.11E-01	1.09E-01	1.02E-01	9.67E-02	8.95E-02	8.75E-02
6208.175	1.07E-01	1.05E-01	9.77E-02	9.33E-02	8.67E-02	8.48E-02
6208.125	1.04E-01	9.90E-02	9.44E-02	9.03E-02	8.41E-02	8.22E-02
6208.075	1.02E-01	9.74E-02	9.14E-02	8.91E-02	8.27E-02	8.00E-02
6208.025	9.85E-02	9.44E-02	8.85E-02	8.37E-02	8.15E-02	7.89E-02
6207.975	9.70E-02	9.34E-02	8.74E-02	8.24E-02	7.93E-02	7.67E-02
6207.925	9.58E-02	9.19E-02	8.79E-02	8.16E-02	7.72E-02	7.46E-02
6207.875	9.93E-02	9.64E-02	8.91E-02	8.42E-02	7.85E-02	7.34E-02
6207.825	9.90E-02	9.62E-02	9.29E-02	8.75E-02	7.72E-02	7.13E-02
6207.775	9.96E-02	9.67E-02	9.13E-02	8.59E-02	7.70E-02	7.15E-02
6207.725	9.60E-02	9.21E-02	8.76E-02	8.23E-02	7.49E-02	6.97E-02
6207.675	9.07E-02	8.85E-02	8.39E-02	7.90E-02	7.20E-02	6.90E-02
6207.625	8.73E-02	8.40E-02	8.05E-02	7.37E-02	6.93E-02	6.65E-02
6207.575	9.07E-02	8.16E-02	7.50E-02	7.09E-02	6.69E-02	6.50E-02
6207.525	9.34E-02	8.21E-02	7.30E-02	6.83E-02	6.53E-02	6.29E-02
6207.475	9.08E-02	7.98E-02	7.12E-02	6.67E-02	6.31E-02	6.15E-02
6207.425	8.36E-02	7.61E-02	6.86E-02	6.44E-02	6.17E-02	5.93E-02
6207.375	7.74E-02	7.03E-02	6.62E-02	6.22E-02	5.97E-02	5.80E-02

X (km): 616.275 616.325 616.375 616.425 616.475 616.525

Y (km)

6212.375	9.59E-02	9.65E-02	9.65E-02	9.68E-02	9.67E-02	9.65E-02
6212.325	9.87E-02	9.91E-02	9.91E-02	9.93E-02	9.94E-02	9.95E-02
6212.275	1.01E-01	1.02E-01	1.02E-01	1.02E-01	1.02E-01	1.02E-01
6212.225	1.04E-01	1.04E-01	1.04E-01	1.05E-01	1.05E-01	1.05E-01
6212.175	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.08E-01
6212.125	1.10E-01	1.10E-01	1.10E-01	1.10E-01	1.10E-01	1.10E-01
6212.075	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.14E-01	1.13E-01
6212.025	1.16E-01	1.16E-01	1.16E-01	1.17E-01	1.16E-01	1.16E-01
6211.975	1.19E-01	1.19E-01	1.20E-01	1.20E-01	1.19E-01	1.19E-01
6211.925	1.22E-01	1.23E-01	1.23E-01	1.22E-01	1.22E-01	1.22E-01
6211.875	1.25E-01	1.26E-01	1.26E-01	1.25E-01	1.24E-01	1.25E-01
6211.825	1.28E-01	1.29E-01	1.30E-01	1.29E-01	1.28E-01	1.27E-01
6211.775	1.31E-01	1.33E-01	1.33E-01	1.33E-01	1.32E-01	1.30E-01
6211.725	1.34E-01	1.36E-01	1.37E-01	1.37E-01	1.36E-01	1.34E-01
6211.675	1.37E-01	1.40E-01	1.41E-01	1.41E-01	1.40E-01	1.39E-01
6211.625	1.40E-01	1.43E-01	1.43E-01	1.45E-01	1.45E-01	1.44E-01
6211.575	1.48E-01	1.44E-01	1.46E-01	1.49E-01	1.49E-01	1.49E-01
6211.525	1.55E-01	1.52E-01	1.47E-01	1.52E-01	1.53E-01	1.53E-01
6211.475	1.62E-01	1.59E-01	1.53E-01	1.53E-01	1.56E-01	1.56E-01
6211.425	1.68E-01	1.65E-01	1.60E-01	1.54E-01	1.58E-01	1.58E-01
6211.375	1.74E-01	1.73E-01	1.67E-01	1.60E-01	1.58E-01	1.61E-01
6211.325	1.79E-01	1.80E-01	1.75E-01	1.68E-01	1.62E-01	1.64E-01
6211.275	1.84E-01	1.84E-01	1.79E-01	1.74E-01	1.70E-01	1.66E-01
6211.225	1.86E-01	1.85E-01	1.85E-01	1.82E-01	1.79E-01	1.74E-01
6211.175	1.99E-01	1.99E-01	1.99E-01	1.95E-01	1.91E-01	1.86E-01
6211.125	2.13E-01	2.13E-01	2.12E-01	2.09E-01	2.05E-01	1.98E-01
6211.075	2.24E-01	2.24E-01	2.22E-01	2.20E-01	2.15E-01	2.09E-01
6211.025	2.32E-01	2.31E-01	2.28E-01	2.28E-01	2.25E-01	2.19E-01
6210.975	2.35E-01	2.36E-01	2.35E-01	2.35E-01	2.33E-01	2.27E-01
6210.925	2.43E-01	2.43E-01	2.44E-01	2.44E-01	2.42E-01	2.38E-01
6210.875	2.50E-01	2.51E-01	2.52E-01	2.55E-01	2.52E-01	2.49E-01
6210.825	2.61E-01	2.60E-01	2.64E-01	2.65E-01	2.64E-01	2.62E-01
6210.775	2.67E-01	2.70E-01	2.73E-01	2.79E-01	2.78E-01	2.75E-01



APPENDIX B Dispersion Modelling

6210.725	2.78E-01	2.79E-01	2.82E-01	2.92E-01	2.92E-01	2.92E-01
6210.675	2.92E-01	2.92E-01	2.95E-01	3.00E-01	3.10E-01	3.09E-01
6210.625	3.09E-01	3.07E-01	3.07E-01	3.14E-01	3.22E-01	3.17E-01
6210.575	3.29E-01	3.16E-01	3.13E-01	3.29E-01	3.37E-01	3.18E-01
6210.525	3.51E-01	3.37E-01	3.32E-01	3.32E-01	3.30E-01	3.11E-01
6210.475	3.70E-01	3.65E-01	3.49E-01	3.45E-01	3.36E-01	3.11E-01
6210.425	3.99E-01	3.92E-01	3.74E-01	3.68E-01	3.52E-01	3.23E-01
6210.375	4.31E-01	4.23E-01	4.08E-01	3.94E-01	3.73E-01	3.38E-01
6210.325	4.76E-01	4.65E-01	4.47E-01	4.28E-01	3.94E-01	3.43E-01
6210.275	5.31E-01	5.15E-01	4.96E-01	4.64E-01	4.12E-01	3.54E-01
6210.225	5.98E-01	5.74E-01	5.52E-01	4.98E-01	4.26E-01	3.65E-01
6210.175	6.78E-01	6.46E-01	6.01E-01	5.28E-01	4.36E-01	3.85E-01
6210.125	7.64E-01	7.23E-01	6.60E-01	5.47E-01	4.50E-01	4.21E-01
6210.075	8.81E-01	8.35E-01	7.06E-01	5.63E-01	5.04E-01	4.71E-01
6210.025	1.01E+00	9.24E-01	7.07E-01	6.33E-01	6.10E-01	5.74E-01
6209.975	1.18E+00	9.82E-01	7.91E-01	8.12E-01	8.09E-01	7.45E-01
6209.925	1.33E+00	9.62E-01	1.06E+00	1.12E+00	1.08E+00	9.94E-01
6209.875	1.28E+00	1.19E+00	1.52E+00	1.57E+00	1.59E+00	1.46E+00
6209.825	1.98E+00	2.04E+00	2.27E+00	2.20E+00	1.99E+00	1.74E+00
6209.775	2.19E+00	1.96E+00	1.81E+00	1.90E+00	1.95E+00	1.76E+00
6209.725	2.01E+00	1.80E+00	1.93E+00	1.67E+00	1.65E+00	1.67E+00
6209.675	2.13E+00	1.93E+00	1.82E+00	1.90E+00	1.74E+00	1.69E+00
6209.625	2.76E+00	2.43E+00	2.06E+00	2.12E+00	2.00E+00	1.78E+00
6209.575	2.93E+00	2.87E+00	2.41E+00	2.13E+00	1.98E+00	1.66E+00
6209.525	1.46E+00	1.91E+00	1.92E+00	1.74E+00	1.50E+00	1.24E+00
6209.475	8.96E-01	1.22E+00	1.27E+00	1.14E+00	9.80E-01	8.91E-01
6209.425	7.23E-01	9.06E-01	1.01E+00	8.41E-01	6.85E-01	5.68E-01
6209.375	6.38E-01	6.96E-01	8.03E-01	7.47E-01	6.07E-01	4.67E-01
6209.325	6.28E-01	5.73E-01	5.84E-01	5.66E-01	5.18E-01	4.17E-01
6209.275	6.18E-01	5.30E-01	4.62E-01	4.52E-01	4.37E-01	4.03E-01
6209.225	5.73E-01	5.16E-01	4.49E-01	4.20E-01	4.08E-01	4.10E-01
6209.175	5.05E-01	4.78E-01	4.41E-01	3.99E-01	3.74E-01	3.46E-01
6209.125	4.37E-01	4.03E-01	3.95E-01	3.56E-01	3.11E-01	2.64E-01
6209.075	3.73E-01	3.53E-01	3.38E-01	3.15E-01	2.77E-01	2.30E-01
6209.025	3.09E-01	3.03E-01	2.71E-01	2.46E-01	2.15E-01	2.15E-01
6208.975	2.73E-01	2.54E-01	2.22E-01	2.08E-01	1.97E-01	1.93E-01
6208.925	2.54E-01	2.42E-01	2.10E-01	1.99E-01	1.88E-01	1.85E-01
6208.875	2.41E-01	2.31E-01	2.18E-01	1.98E-01	1.79E-01	1.79E-01
6208.825	2.01E-01	1.80E-01	1.80E-01	1.75E-01	1.78E-01	1.70E-01
6208.775	1.50E-01	1.59E-01	1.70E-01	1.74E-01	1.71E-01	1.66E-01
6208.725	1.39E-01	1.47E-01	1.60E-01	1.64E-01	1.63E-01	1.58E-01
6208.675	1.32E-01	1.36E-01	1.46E-01	1.51E-01	1.58E-01	1.52E-01
6208.625	1.21E-01	1.35E-01	1.38E-01	1.48E-01	1.44E-01	1.48E-01
6208.575	1.20E-01	1.28E-01	1.34E-01	1.42E-01	1.38E-01	1.43E-01
6208.525	1.13E-01	1.17E-01	1.27E-01	1.30E-01	1.33E-01	1.32E-01
6208.475	1.09E-01	1.11E-01	1.23E-01	1.24E-01	1.34E-01	1.34E-01
6208.425	1.01E-01	1.10E-01	1.12E-01	1.19E-01	1.23E-01	1.29E-01
6208.375	1.00E-01	1.01E-01	1.11E-01	1.19E-01	1.24E-01	1.25E-01
6208.325	9.63E-02	1.01E-01	1.03E-01	1.13E-01	1.18E-01	1.20E-01
6208.275	9.29E-02	9.71E-02	1.02E-01	1.10E-01	1.10E-01	1.18E-01
6208.225	8.85E-02	9.38E-02	9.86E-02	1.02E-01	1.11E-01	1.12E-01
6208.175	8.58E-02	9.08E-02	9.51E-02	1.01E-01	1.07E-01	1.09E-01
6208.125	8.33E-02	8.68E-02	9.17E-02	9.71E-02	1.02E-01	1.05E-01
6208.075	8.10E-02	8.40E-02	8.84E-02	9.37E-02	9.87E-02	1.02E-01
6208.025	7.96E-02	8.12E-02	8.54E-02	9.06E-02	9.54E-02	9.88E-02
6207.975	7.63E-02	7.87E-02	8.27E-02	8.76E-02	9.23E-02	9.56E-02
6207.925	7.40E-02	7.63E-02	8.02E-02	8.48E-02	8.93E-02	9.25E-02
6207.875	7.19E-02	7.43E-02	7.79E-02	8.22E-02	8.64E-02	8.93E-02
6207.825	7.00E-02	7.23E-02	7.57E-02	7.97E-02	8.35E-02	8.62E-02
6207.775	6.91E-02	7.05E-02	7.36E-02	7.72E-02	8.07E-02	8.31E-02
6207.725	6.84E-02	6.95E-02	7.16E-02	7.48E-02	7.79E-02	8.02E-02
6207.675	6.68E-02	6.78E-02	6.96E-02	7.25E-02	7.52E-02	7.74E-02
6207.625	6.53E-02	6.61E-02	6.77E-02	7.01E-02	7.26E-02	7.47E-02
6207.575	6.38E-02	6.45E-02	6.57E-02	6.79E-02	7.01E-02	7.22E-02
6207.525	6.23E-02	6.28E-02	6.38E-02	6.57E-02	6.77E-02	6.98E-02
6207.475	6.09E-02	6.05E-02	6.19E-02	6.36E-02	6.55E-02	6.76E-02
6207.425	5.88E-02	5.89E-02	6.01E-02	6.16E-02	6.34E-02	6.55E-02
6207.375	5.73E-02	5.73E-02	5.83E-02	5.97E-02	6.15E-02	6.36E-02

X (km): 616.575 616.625 616.675 616.725 616.775 616.825



APPENDIX B Dispersion Modelling

Y (km)							
6212.375	9.64E-02	9.62E-02	9.54E-02	9.49E-02	9.43E-02	9.39E-02	
6212.325	9.95E-02	9.90E-02	9.82E-02	9.75E-02	9.67E-02	9.61E-02	
6212.275	1.02E-01	1.02E-01	1.01E-01	1.00E-01	9.94E-02	9.87E-02	
6212.225	1.05E-01	1.04E-01	1.04E-01	1.02E-01	1.01E-01	1.00E-01	
6212.175	1.08E-01	1.06E-01	1.06E-01	1.05E-01	1.04E-01	1.03E-01	
6212.125	1.10E-01	1.09E-01	1.09E-01	1.07E-01	1.06E-01	1.06E-01	
6212.075	1.13E-01	1.12E-01	1.11E-01	1.10E-01	1.09E-01	1.08E-01	
6212.025	1.16E-01	1.15E-01	1.14E-01	1.13E-01	1.12E-01	1.10E-01	
6211.975	1.19E-01	1.18E-01	1.17E-01	1.15E-01	1.14E-01	1.13E-01	
6211.925	1.22E-01	1.21E-01	1.20E-01	1.18E-01	1.16E-01	1.15E-01	
6211.875	1.25E-01	1.23E-01	1.22E-01	1.20E-01	1.19E-01	1.18E-01	
6211.825	1.27E-01	1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.22E-01	
6211.775	1.28E-01	1.28E-01	1.27E-01	1.25E-01	1.23E-01	1.24E-01	
6211.725	1.31E-01	1.29E-01	1.28E-01	1.27E-01	1.25E-01	1.25E-01	
6211.675	1.37E-01	1.32E-01	1.29E-01	1.28E-01	1.26E-01	1.24E-01	
6211.625	1.43E-01	1.40E-01	1.37E-01	1.33E-01	1.30E-01	1.28E-01	
6211.575	1.48E-01	1.46E-01	1.44E-01	1.42E-01	1.39E-01	1.34E-01	
6211.525	1.52E-01	1.50E-01	1.49E-01	1.48E-01	1.46E-01	1.41E-01	
6211.475	1.56E-01	1.54E-01	1.53E-01	1.52E-01	1.49E-01	1.45E-01	
6211.425	1.59E-01	1.57E-01	1.55E-01	1.53E-01	1.52E-01	1.48E-01	
6211.375	1.60E-01	1.58E-01	1.57E-01	1.55E-01	1.53E-01	1.50E-01	
6211.325	1.62E-01	1.59E-01	1.58E-01	1.56E-01	1.56E-01	1.52E-01	
6211.275	1.64E-01	1.58E-01	1.58E-01	1.57E-01	1.55E-01	1.51E-01	
6211.225	1.70E-01	1.65E-01	1.62E-01	1.59E-01	1.58E-01	1.52E-01	
6211.175	1.83E-01	1.79E-01	1.74E-01	1.66E-01	1.60E-01	1.55E-01	
6211.125	1.94E-01	1.89E-01	1.83E-01	1.73E-01	1.67E-01	1.60E-01	
6211.075	2.03E-01	1.97E-01	1.92E-01	1.80E-01	1.71E-01	1.66E-01	
6211.025	2.12E-01	2.06E-01	2.00E-01	1.91E-01	1.82E-01	1.76E-01	
6210.975	2.21E-01	2.15E-01	2.09E-01	2.02E-01	1.93E-01	1.85E-01	
6210.925	2.33E-01	2.26E-01	2.19E-01	2.10E-01	2.00E-01	1.91E-01	
6210.875	2.46E-01	2.38E-01	2.29E-01	2.15E-01	1.99E-01	1.90E-01	
6210.825	2.59E-01	2.51E-01	2.37E-01	2.13E-01	1.98E-01	1.86E-01	
6210.775	2.69E-01	2.61E-01	2.39E-01	2.15E-01	1.90E-01	1.73E-01	
6210.725	2.83E-01	2.69E-01	2.40E-01	2.08E-01	1.90E-01	1.73E-01	
6210.675	2.94E-01	2.65E-01	2.30E-01	2.08E-01	1.89E-01	1.73E-01	
6210.625	2.92E-01	2.50E-01	2.28E-01	2.06E-01	1.89E-01	1.74E-01	
6210.575	2.80E-01	2.54E-01	2.33E-01	2.03E-01	1.92E-01	1.81E-01	
6210.525	2.77E-01	2.54E-01	2.31E-01	2.06E-01	1.92E-01	1.88E-01	
6210.475	2.85E-01	2.58E-01	2.33E-01	2.17E-01	2.09E-01	2.00E-01	
6210.425	2.92E-01	2.62E-01	2.33E-01	2.23E-01	2.23E-01	2.23E-01	
6210.375	2.93E-01	2.68E-01	2.43E-01	2.34E-01	2.37E-01	2.42E-01	
6210.325	3.01E-01	2.72E-01	2.58E-01	2.57E-01	2.58E-01	2.57E-01	
6210.275	3.25E-01	2.93E-01	2.84E-01	2.80E-01	2.85E-01	2.83E-01	
6210.225	3.44E-01	3.18E-01	3.15E-01	3.05E-01	3.05E-01	3.00E-01	
6210.175	3.70E-01	3.55E-01	3.41E-01	3.45E-01	3.34E-01	3.40E-01	
6210.125	4.04E-01	3.89E-01	3.90E-01	3.93E-01	4.17E-01	4.04E-01	
6210.075	4.54E-01	4.46E-01	4.41E-01	4.45E-01	4.63E-01	4.50E-01	
6210.025	5.54E-01	5.22E-01	4.97E-01	5.29E-01	5.54E-01	5.23E-01	
6209.975	7.03E-01	6.36E-01	5.91E-01	6.10E-01	6.20E-01	6.01E-01	
6209.925	9.12E-01	8.28E-01	7.56E-01	7.28E-01	7.11E-01	6.36E-01	
6209.875	1.24E+00	1.03E+00	8.98E-01	8.16E-01	7.48E-01	5.99E-01	
6209.825	1.55E+00	1.25E+00	9.89E-01	8.09E-01	6.66E-01	6.05E-01	
6209.775	1.62E+00	1.36E+00	9.98E-01	7.88E-01	6.90E-01	6.59E-01	
6209.725	1.60E+00	1.42E+00	1.03E+00	8.78E-01	7.34E-01	6.57E-01	
6209.675	1.65E+00	1.46E+00	1.02E+00	9.88E-01	8.16E-01	6.98E-01	
6209.625	1.58E+00	1.24E+00	1.02E+00	9.07E-01	7.45E-01	6.83E-01	
6209.575	1.33E+00	1.06E+00	9.19E-01	7.45E-01	6.92E-01	6.54E-01	
6209.525	9.54E-01	7.95E-01	7.24E-01	6.81E-01	6.26E-01	6.26E-01	
6209.475	7.20E-01	6.77E-01	6.36E-01	6.16E-01	5.66E-01	5.46E-01	
6209.425	5.67E-01	5.81E-01	5.88E-01	5.52E-01	5.31E-01	4.98E-01	
6209.375	4.76E-01	4.96E-01	4.94E-01	5.09E-01	4.97E-01	4.61E-01	
6209.325	4.06E-01	4.06E-01	4.21E-01	4.31E-01	4.42E-01	4.36E-01	
6209.275	3.71E-01	3.58E-01	3.62E-01	3.87E-01	3.86E-01	3.84E-01	
6209.225	3.60E-01	3.35E-01	3.29E-01	3.33E-01	3.52E-01	3.55E-01	
6209.175	3.12E-01	3.06E-01	3.13E-01	3.19E-01	3.10E-01	3.12E-01	
6209.125	2.68E-01	2.78E-01	2.80E-01	2.86E-01	2.89E-01	2.94E-01	
6209.075	2.50E-01	2.57E-01	2.62E-01	2.70E-01	2.77E-01	2.76E-01	
6209.025	2.17E-01	2.33E-01	2.27E-01	2.43E-01	2.49E-01	2.56E-01	
6208.975	2.03E-01	2.03E-01	2.12E-01	2.22E-01	2.24E-01	2.32E-01	



APPENDIX B Dispersion Modelling

6208.925 1.80E-01 1.85E-01 1.99E-01 2.00E-01 2.04E-01 2.11E-01
6208.875 1.74E-01 1.70E-01 1.81E-01 1.83E-01 1.89E-01 1.95E-01
6208.825 1.63E-01 1.63E-01 1.63E-01 1.69E-01 1.76E-01 1.82E-01
6208.775 1.57E-01 1.51E-01 1.54E-01 1.56E-01 1.64E-01 1.71E-01
6208.725 1.53E-01 1.44E-01 1.43E-01 1.47E-01 1.53E-01 1.59E-01
6208.675 1.48E-01 1.42E-01 1.37E-01 1.39E-01 1.43E-01 1.49E-01
6208.625 1.42E-01 1.38E-01 1.32E-01 1.32E-01 1.35E-01 1.40E-01
6208.575 1.40E-01 1.35E-01 1.29E-01 1.27E-01 1.28E-01 1.32E-01
6208.525 1.34E-01 1.30E-01 1.26E-01 1.23E-01 1.23E-01 1.25E-01
6208.475 1.31E-01 1.27E-01 1.23E-01 1.20E-01 1.18E-01 1.18E-01
6208.425 1.23E-01 1.24E-01 1.20E-01 1.17E-01 1.14E-01 1.12E-01
6208.375 1.23E-01 1.21E-01 1.18E-01 1.14E-01 1.11E-01 1.07E-01
6208.325 1.20E-01 1.18E-01 1.15E-01 1.12E-01 1.07E-01 1.03E-01
6208.275 1.16E-01 1.15E-01 1.12E-01 1.09E-01 1.04E-01 1.00E-01
6208.225 1.13E-01 1.12E-01 1.10E-01 1.06E-01 1.01E-01 9.72E-02
6208.175 1.10E-01 1.09E-01 1.07E-01 1.03E-01 9.83E-02 9.47E-02
6208.125 1.07E-01 1.06E-01 1.03E-01 9.98E-02 9.59E-02 9.24E-02
6208.075 1.03E-01 1.03E-01 1.00E-01 9.69E-02 9.35E-02 9.02E-02
6208.025 1.00E-01 9.92E-02 9.70E-02 9.42E-02 9.13E-02 8.82E-02
6207.975 9.68E-02 9.59E-02 9.40E-02 9.17E-02 8.92E-02 8.62E-02
6207.925 9.35E-02 9.27E-02 9.11E-02 8.92E-02 8.71E-02 8.43E-02
6207.875 9.03E-02 8.97E-02 8.84E-02 8.69E-02 8.50E-02 8.23E-02
6207.825 8.71E-02 8.68E-02 8.59E-02 8.47E-02 8.29E-02 8.03E-02
6207.775 8.42E-02 8.40E-02 8.34E-02 8.25E-02 8.08E-02 7.84E-02
6207.725 8.13E-02 8.15E-02 8.11E-02 8.03E-02 7.88E-02 7.66E-02
6207.675 7.86E-02 7.90E-02 7.89E-02 7.82E-02 7.68E-02 7.48E-02
6207.625 7.61E-02 7.68E-02 7.68E-02 7.62E-02 7.48E-02 7.30E-02
6207.575 7.37E-02 7.46E-02 7.47E-02 7.41E-02 7.29E-02 7.13E-02
6207.525 7.15E-02 7.25E-02 7.27E-02 7.21E-02 7.10E-02 6.97E-02
6207.475 6.94E-02 7.05E-02 7.07E-02 7.02E-02 6.93E-02 6.81E-02
6207.425 6.74E-02 6.86E-02 6.88E-02 6.84E-02 6.75E-02 6.66E-02
6207.375 6.55E-02 6.67E-02 6.70E-02 6.66E-02 6.59E-02 6.51E-02

X (km): 616.875 616.925 616.975 617.025 617.075 617.125

Y (km)

6212.375 9.31E-02 9.23E-02 9.10E-02 8.93E-02 8.77E-02 8.84E-02
6212.325 9.55E-02 9.42E-02 9.29E-02 9.10E-02 9.12E-02 9.13E-02
6212.275 9.79E-02 9.66E-02 9.50E-02 9.39E-02 9.41E-02 9.35E-02
6212.225 9.98E-02 9.82E-02 9.71E-02 9.66E-02 9.68E-02 9.58E-02
6212.175 1.02E-01 1.01E-01 9.96E-02 9.94E-02 9.95E-02 9.80E-02
6212.125 1.05E-01 1.04E-01 1.03E-01 1.03E-01 1.02E-01 1.00E-01
6212.075 1.07E-01 1.07E-01 1.06E-01 1.05E-01 1.04E-01 1.01E-01
6212.025 1.10E-01 1.09E-01 1.09E-01 1.08E-01 1.06E-01 1.03E-01
6211.975 1.13E-01 1.13E-01 1.12E-01 1.11E-01 1.08E-01 1.04E-01
6211.925 1.16E-01 1.16E-01 1.15E-01 1.13E-01 1.09E-01 1.05E-01
6211.875 1.19E-01 1.19E-01 1.17E-01 1.15E-01 1.11E-01 1.06E-01
6211.825 1.23E-01 1.22E-01 1.20E-01 1.17E-01 1.13E-01 1.08E-01
6211.775 1.25E-01 1.23E-01 1.21E-01 1.19E-01 1.14E-01 1.10E-01
6211.725 1.25E-01 1.25E-01 1.23E-01 1.20E-01 1.16E-01 1.11E-01
6211.675 1.24E-01 1.24E-01 1.22E-01 1.20E-01 1.16E-01 1.12E-01
6211.625 1.26E-01 1.24E-01 1.23E-01 1.20E-01 1.16E-01 1.12E-01
6211.575 1.29E-01 1.26E-01 1.24E-01 1.19E-01 1.16E-01 1.13E-01
6211.525 1.34E-01 1.28E-01 1.24E-01 1.19E-01 1.16E-01 1.13E-01
6211.475 1.39E-01 1.33E-01 1.26E-01 1.18E-01 1.16E-01 1.14E-01
6211.425 1.43E-01 1.35E-01 1.27E-01 1.21E-01 1.17E-01 1.14E-01
6211.375 1.44E-01 1.36E-01 1.28E-01 1.22E-01 1.18E-01 1.14E-01
6211.325 1.44E-01 1.35E-01 1.29E-01 1.25E-01 1.20E-01 1.14E-01
6211.275 1.44E-01 1.37E-01 1.26E-01 1.20E-01 1.14E-01 1.08E-01
6211.225 1.46E-01 1.35E-01 1.28E-01 1.20E-01 1.14E-01 1.08E-01
6211.175 1.49E-01 1.44E-01 1.37E-01 1.23E-01 1.15E-01 1.08E-01
6211.125 1.55E-01 1.49E-01 1.41E-01 1.32E-01 1.17E-01 1.10E-01
6211.075 1.61E-01 1.54E-01 1.44E-01 1.35E-01 1.19E-01 1.12E-01
6211.025 1.68E-01 1.59E-01 1.47E-01 1.36E-01 1.21E-01 1.15E-01
6210.975 1.76E-01 1.62E-01 1.47E-01 1.35E-01 1.23E-01 1.18E-01
6210.925 1.80E-01 1.59E-01 1.46E-01 1.31E-01 1.26E-01 1.22E-01
6210.875 1.74E-01 1.57E-01 1.40E-01 1.34E-01 1.29E-01 1.28E-01
6210.825 1.72E-01 1.51E-01 1.42E-01 1.37E-01 1.33E-01 1.34E-01
6210.775 1.61E-01 1.51E-01 1.44E-01 1.41E-01 1.40E-01 1.41E-01
6210.725 1.61E-01 1.52E-01 1.49E-01 1.48E-01 1.48E-01 1.49E-01



APPENDIX B Dispersion Modelling

6210.675	1.63E-01	1.57E-01	1.56E-01	1.57E-01	1.56E-01	1.57E-01
6210.625	1.68E-01	1.65E-01	1.65E-01	1.66E-01	1.67E-01	1.66E-01
6210.575	1.76E-01	1.74E-01	1.75E-01	1.75E-01	1.75E-01	1.72E-01
6210.525	1.89E-01	1.88E-01	1.88E-01	1.87E-01	1.84E-01	1.81E-01
6210.475	1.98E-01	1.97E-01	1.95E-01	1.98E-01	1.94E-01	1.88E-01
6210.425	2.18E-01	2.15E-01	2.11E-01	2.09E-01	2.00E-01	1.97E-01
6210.375	2.36E-01	2.32E-01	2.24E-01	2.14E-01	2.10E-01	2.08E-01
6210.325	2.55E-01	2.48E-01	2.39E-01	2.27E-01	2.20E-01	2.15E-01
6210.275	2.78E-01	2.69E-01	2.55E-01	2.44E-01	2.40E-01	2.36E-01
6210.225	2.93E-01	2.85E-01	2.70E-01	2.63E-01	2.59E-01	2.48E-01
6210.175	3.24E-01	3.10E-01	3.00E-01	2.90E-01	2.74E-01	2.77E-01
6210.125	4.00E-01	3.44E-01	3.23E-01	3.19E-01	3.06E-01	3.00E-01
6210.075	4.40E-01	3.89E-01	3.51E-01	3.45E-01	3.35E-01	3.35E-01
6210.025	4.90E-01	4.11E-01	4.01E-01	3.95E-01	3.78E-01	3.65E-01
6209.975	5.34E-01	4.40E-01	4.35E-01	4.35E-01	4.16E-01	3.98E-01
6209.925	5.07E-01	4.88E-01	4.79E-01	4.66E-01	4.62E-01	4.37E-01
6209.875	5.42E-01	5.24E-01	5.19E-01	5.03E-01	4.98E-01	4.84E-01
6209.825	5.79E-01	5.73E-01	5.55E-01	5.38E-01	5.36E-01	5.30E-01
6209.775	6.09E-01	5.96E-01	5.66E-01	5.64E-01	5.64E-01	5.71E-01
6209.725	6.33E-01	6.22E-01	5.91E-01	5.90E-01	5.89E-01	6.06E-01
6209.675	6.79E-01	6.32E-01	6.37E-01	6.16E-01	6.14E-01	6.31E-01
6209.625	6.79E-01	6.33E-01	6.27E-01	6.19E-01	6.22E-01	6.43E-01
6209.575	6.30E-01	6.23E-01	6.08E-01	6.00E-01	6.06E-01	6.28E-01
6209.525	5.82E-01	5.85E-01	5.69E-01	5.69E-01	5.78E-01	6.01E-01
6209.475	5.40E-01	5.18E-01	5.20E-01	5.23E-01	5.35E-01	5.58E-01
6209.425	4.85E-01	4.85E-01	4.80E-01	4.81E-01	4.91E-01	5.06E-01
6209.375	4.66E-01	4.51E-01	4.48E-01	4.47E-01	4.52E-01	4.55E-01
6209.325	4.21E-01	4.16E-01	4.14E-01	4.13E-01	4.14E-01	4.14E-01
6209.275	3.81E-01	3.80E-01	3.80E-01	3.81E-01	3.80E-01	3.79E-01
6209.225	3.47E-01	3.46E-01	3.47E-01	3.48E-01	3.47E-01	3.56E-01
6209.175	3.19E-01	3.19E-01	3.18E-01	3.17E-01	3.23E-01	3.35E-01
6209.125	2.93E-01	2.93E-01	2.93E-01	2.98E-01	3.05E-01	3.13E-01
6209.075	2.74E-01	2.71E-01	2.73E-01	2.79E-01	2.88E-01	2.89E-01
6209.025	2.57E-01	2.57E-01	2.59E-01	2.63E-01	2.69E-01	2.67E-01
6208.975	2.40E-01	2.45E-01	2.48E-01	2.51E-01	2.50E-01	2.47E-01
6208.925	2.22E-01	2.30E-01	2.37E-01	2.39E-01	2.34E-01	2.31E-01
6208.875	2.04E-01	2.14E-01	2.23E-01	2.25E-01	2.22E-01	2.17E-01
6208.825	1.89E-01	1.97E-01	2.06E-01	2.09E-01	2.09E-01	2.05E-01
6208.775	1.77E-01	1.83E-01	1.88E-01	1.92E-01	1.94E-01	1.93E-01
6208.725	1.66E-01	1.71E-01	1.73E-01	1.76E-01	1.79E-01	1.80E-01
6208.675	1.55E-01	1.59E-01	1.60E-01	1.62E-01	1.65E-01	1.67E-01
6208.625	1.45E-01	1.47E-01	1.49E-01	1.50E-01	1.52E-01	1.55E-01
6208.575	1.35E-01	1.37E-01	1.39E-01	1.40E-01	1.41E-01	1.43E-01
6208.525	1.26E-01	1.28E-01	1.29E-01	1.31E-01	1.31E-01	1.34E-01
6208.475	1.18E-01	1.19E-01	1.21E-01	1.22E-01	1.23E-01	1.25E-01
6208.425	1.12E-01	1.12E-01	1.14E-01	1.14E-01	1.15E-01	1.18E-01
6208.375	1.06E-01	1.06E-01	1.07E-01	1.07E-01	1.09E-01	1.11E-01
6208.325	1.01E-01	1.01E-01	1.01E-01	1.01E-01	1.02E-01	1.05E-01
6208.275	9.76E-02	9.63E-02	9.55E-02	9.56E-02	9.69E-02	9.88E-02
6208.225	9.44E-02	9.23E-02	9.10E-02	9.09E-02	9.20E-02	9.36E-02
6208.175	9.17E-02	8.89E-02	8.72E-02	8.68E-02	8.77E-02	8.89E-02
6208.125	8.92E-02	8.61E-02	8.39E-02	8.33E-02	8.37E-02	8.48E-02
6208.075	8.69E-02	8.37E-02	8.12E-02	8.03E-02	8.03E-02	8.11E-02
6208.025	8.48E-02	8.15E-02	7.89E-02	7.76E-02	7.74E-02	7.77E-02
6207.975	8.29E-02	7.95E-02	7.70E-02	7.55E-02	7.48E-02	7.48E-02
6207.925	8.09E-02	7.77E-02	7.53E-02	7.36E-02	7.27E-02	7.22E-02
6207.875	7.91E-02	7.62E-02	7.37E-02	7.20E-02	7.08E-02	7.00E-02
6207.825	7.74E-02	7.46E-02	7.23E-02	7.06E-02	6.91E-02	6.80E-02
6207.775	7.58E-02	7.32E-02	7.11E-02	6.92E-02	6.76E-02	6.64E-02
6207.725	7.42E-02	7.19E-02	6.98E-02	6.81E-02	6.64E-02	6.49E-02
6207.675	7.26E-02	7.06E-02	6.86E-02	6.69E-02	6.52E-02	6.35E-02
6207.625	7.11E-02	6.93E-02	6.75E-02	6.58E-02	6.41E-02	6.24E-02
6207.575	6.96E-02	6.80E-02	6.64E-02	6.47E-02	6.30E-02	6.13E-02
6207.525	6.82E-02	6.68E-02	6.53E-02	6.37E-02	6.20E-02	6.04E-02
6207.475	6.69E-02	6.56E-02	6.42E-02	6.27E-02	6.11E-02	5.94E-02
6207.425	6.55E-02	6.44E-02	6.31E-02	6.17E-02	6.01E-02	5.85E-02
6207.375	6.42E-02	6.32E-02	6.21E-02	6.08E-02	5.93E-02	5.76E-02

X (km): 617.175 617.225 617.275 617.325 617.375



APPENDIX B Dispersion Modelling

Y (km)					
6212.375	8.81E-02	8.65E-02	8.43E-02	8.17E-02	7.81E-02
6212.325	9.00E-02	8.82E-02	8.60E-02	8.34E-02	8.01E-02
6212.275	9.20E-02	8.99E-02	8.77E-02	8.53E-02	8.16E-02
6212.225	9.38E-02	9.14E-02	8.88E-02	8.64E-02	8.29E-02
6212.175	9.57E-02	9.30E-02	9.00E-02	8.65E-02	8.27E-02
6212.125	9.73E-02	9.41E-02	8.98E-02	8.60E-02	8.29E-02
6212.075	9.82E-02	9.38E-02	8.92E-02	8.54E-02	8.27E-02
6212.025	9.89E-02	9.42E-02	8.98E-02	8.61E-02	8.26E-02
6211.975	9.96E-02	9.44E-02	9.04E-02	8.70E-02	8.17E-02
6211.925	1.00E-01	9.56E-02	9.18E-02	8.86E-02	8.27E-02
6211.875	1.00E-01	9.56E-02	9.21E-02	8.68E-02	8.35E-02
6211.825	1.02E-01	9.72E-02	9.39E-02	9.07E-02	8.65E-02
6211.775	1.06E-01	1.01E-01	9.70E-02	9.31E-02	8.89E-02
6211.725	1.08E-01	1.04E-01	9.91E-02	9.41E-02	8.88E-02
6211.675	1.09E-01	1.05E-01	9.88E-02	9.37E-02	8.66E-02
6211.625	1.09E-01	1.05E-01	9.90E-02	9.18E-02	8.53E-02
6211.575	1.09E-01	1.05E-01	1.00E-01	9.31E-02	8.53E-02
6211.525	1.10E-01	1.06E-01	1.01E-01	9.58E-02	8.56E-02
6211.475	1.12E-01	1.07E-01	1.00E-01	9.16E-02	8.16E-02
6211.425	1.11E-01	1.05E-01	9.63E-02	9.05E-02	8.19E-02
6211.375	1.10E-01	1.03E-01	9.60E-02	8.71E-02	8.30E-02
6211.325	1.08E-01	1.02E-01	9.18E-02	8.77E-02	8.50E-02
6211.275	1.02E-01	9.72E-02	9.23E-02	8.91E-02	8.61E-02
6211.225	1.02E-01	9.78E-02	9.38E-02	9.01E-02	8.86E-02
6211.175	1.03E-01	9.89E-02	9.49E-02	9.35E-02	9.25E-02
6211.125	1.05E-01	1.00E-01	9.81E-02	9.69E-02	9.70E-02
6211.075	1.08E-01	1.03E-01	1.02E-01	1.02E-01	1.01E-01
6211.025	1.11E-01	1.10E-01	1.08E-01	1.07E-01	1.07E-01
6210.975	1.16E-01	1.13E-01	1.14E-01	1.13E-01	1.13E-01
6210.925	1.21E-01	1.20E-01	1.19E-01	1.20E-01	1.19E-01
6210.875	1.27E-01	1.26E-01	1.26E-01	1.25E-01	1.24E-01
6210.825	1.33E-01	1.34E-01	1.32E-01	1.32E-01	1.29E-01
6210.775	1.42E-01	1.40E-01	1.39E-01	1.36E-01	1.33E-01
6210.725	1.49E-01	1.47E-01	1.44E-01	1.41E-01	1.36E-01
6210.675	1.56E-01	1.54E-01	1.47E-01	1.44E-01	1.40E-01
6210.625	1.61E-01	1.57E-01	1.53E-01	1.49E-01	1.43E-01
6210.575	1.69E-01	1.64E-01	1.59E-01	1.53E-01	1.50E-01
6210.525	1.75E-01	1.70E-01	1.65E-01	1.60E-01	1.58E-01
6210.475	1.83E-01	1.78E-01	1.72E-01	1.69E-01	1.67E-01
6210.425	1.92E-01	1.85E-01	1.82E-01	1.80E-01	1.78E-01
6210.375	2.03E-01	1.98E-01	1.94E-01	1.92E-01	1.89E-01
6210.325	2.17E-01	2.11E-01	2.08E-01	2.05E-01	2.02E-01
6210.275	2.32E-01	2.27E-01	2.23E-01	2.19E-01	2.16E-01
6210.225	2.48E-01	2.45E-01	2.40E-01	2.37E-01	2.33E-01
6210.175	2.70E-01	2.66E-01	2.62E-01	2.58E-01	2.53E-01
6210.125	2.96E-01	2.91E-01	2.86E-01	2.80E-01	2.73E-01
6210.075	3.25E-01	3.18E-01	3.09E-01	3.00E-01	2.92E-01
6210.025	3.53E-01	3.43E-01	3.32E-01	3.24E-01	3.15E-01
6209.975	3.82E-01	3.72E-01	3.60E-01	3.51E-01	3.40E-01
6209.925	4.18E-01	4.06E-01	3.92E-01	3.81E-01	3.68E-01
6209.875	4.60E-01	4.43E-01	4.27E-01	4.14E-01	3.99E-01
6209.825	5.07E-01	4.83E-01	4.65E-01	4.51E-01	4.33E-01
6209.775	5.60E-01	5.31E-01	5.10E-01	4.94E-01	4.74E-01
6209.725	6.21E-01	5.95E-01	5.67E-01	5.48E-01	5.22E-01
6209.675	6.75E-01	6.85E-01	6.44E-01	6.19E-01	5.71E-01
6209.625	6.96E-01	7.83E-01	7.49E-01	7.13E-01	5.99E-01
6209.575	6.80E-01	8.06E-01	9.05E-01	7.76E-01	6.60E-01
6209.525	6.49E-01	7.40E-01	7.60E-01	5.73E-01	8.65E-01
6209.475	6.00E-01	6.59E-01	5.08E-01	5.81E-01	1.17E+00
6209.425	5.30E-01	5.34E-01	4.93E-01	5.71E-01	6.58E-01
6209.375	4.57E-01	4.54E-01	4.84E-01	5.34E-01	5.40E-01
6209.325	4.12E-01	4.32E-01	4.47E-01	4.63E-01	4.50E-01
6209.275	3.92E-01	4.04E-01	4.06E-01	4.04E-01	4.01E-01
6209.225	3.70E-01	3.72E-01	3.67E-01	3.59E-01	3.60E-01
6209.175	3.39E-01	3.36E-01	3.32E-01	3.23E-01	3.24E-01
6209.125	3.10E-01	3.04E-01	3.01E-01	2.93E-01	2.93E-01
6209.075	2.86E-01	2.79E-01	2.74E-01	2.66E-01	2.65E-01
6209.025	2.64E-01	2.59E-01	2.53E-01	2.45E-01	2.42E-01
6208.975	2.43E-01	2.42E-01	2.36E-01	2.29E-01	2.25E-01
6208.925	2.25E-01	2.25E-01	2.20E-01	2.15E-01	2.11E-01



APPENDIX B Dispersion Modelling

6208.875	2.12E-01	2.10E-01	2.06E-01	2.01E-01	1.98E-01
6208.825	2.01E-01	1.99E-01	1.94E-01	1.89E-01	1.86E-01
6208.775	1.92E-01	1.90E-01	1.84E-01	1.79E-01	1.76E-01
6208.725	1.81E-01	1.81E-01	1.76E-01	1.71E-01	1.68E-01
6208.675	1.70E-01	1.71E-01	1.68E-01	1.64E-01	1.61E-01
6208.625	1.59E-01	1.61E-01	1.60E-01	1.57E-01	1.55E-01
6208.575	1.47E-01	1.50E-01	1.50E-01	1.49E-01	1.49E-01
6208.525	1.37E-01	1.40E-01	1.41E-01	1.41E-01	1.42E-01
6208.475	1.28E-01	1.30E-01	1.31E-01	1.33E-01	1.34E-01
6208.425	1.20E-01	1.22E-01	1.23E-01	1.24E-01	1.26E-01
6208.375	1.13E-01	1.15E-01	1.15E-01	1.16E-01	1.18E-01
6208.325	1.07E-01	1.08E-01	1.08E-01	1.09E-01	1.11E-01
6208.275	1.01E-01	1.02E-01	1.02E-01	1.03E-01	1.05E-01
6208.225	9.52E-02	9.62E-02	9.66E-02	9.75E-02	9.91E-02
6208.175	9.03E-02	9.10E-02	9.13E-02	9.22E-02	9.38E-02
6208.125	8.58E-02	8.63E-02	8.65E-02	8.73E-02	8.89E-02
6208.075	8.17E-02	8.21E-02	8.20E-02	8.28E-02	8.43E-02
6208.025	7.81E-02	7.82E-02	7.81E-02	7.86E-02	8.00E-02
6207.975	7.49E-02	7.47E-02	7.45E-02	7.49E-02	7.61E-02
6207.925	7.19E-02	7.17E-02	7.13E-02	7.16E-02	7.25E-02
6207.875	6.94E-02	6.89E-02	6.84E-02	6.85E-02	6.93E-02
6207.825	6.72E-02	6.64E-02	6.57E-02	6.57E-02	6.64E-02
6207.775	6.52E-02	6.41E-02	6.33E-02	6.32E-02	6.37E-02
6207.725	6.36E-02	6.22E-02	6.12E-02	6.08E-02	6.13E-02
6207.675	6.21E-02	6.05E-02	5.93E-02	5.88E-02	5.91E-02
6207.625	6.08E-02	5.91E-02	5.76E-02	5.70E-02	5.70E-02
6207.575	5.96E-02	5.77E-02	5.62E-02	5.53E-02	5.53E-02
6207.525	5.85E-02	5.66E-02	5.50E-02	5.39E-02	5.36E-02
6207.475	5.75E-02	5.56E-02	5.38E-02	5.26E-02	5.22E-02
6207.425	5.67E-02	5.47E-02	5.29E-02	5.16E-02	5.09E-02
6207.375	5.58E-02	5.38E-02	5.20E-02	5.06E-02	4.98E-02

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 2
in microgram/m3

X (km): 612.375 612.425 612.475 612.525 612.575 612.625

Y (km)

6212.375	4.07E-02	4.11E-02	4.15E-02	4.18E-02	4.21E-02	4.25E-02
6212.325	4.07E-02	4.13E-02	4.18E-02	4.21E-02	4.25E-02	4.30E-02
6212.275	4.07E-02	4.13E-02	4.19E-02	4.24E-02	4.29E-02	4.34E-02
6212.225	4.05E-02	4.11E-02	4.18E-02	4.25E-02	4.32E-02	4.37E-02
6212.175	4.01E-02	4.09E-02	4.16E-02	4.23E-02	4.30E-02	4.38E-02
6212.125	3.97E-02	4.04E-02	4.12E-02	4.21E-02	4.29E-02	4.36E-02
6212.075	3.94E-02	4.01E-02	4.08E-02	4.16E-02	4.24E-02	4.33E-02
6212.025	3.90E-02	3.97E-02	4.04E-02	4.12E-02	4.21E-02	4.29E-02
6211.975	3.89E-02	3.96E-02	4.02E-02	4.09E-02	4.17E-02	4.25E-02
6211.925	3.90E-02	3.96E-02	4.01E-02	4.08E-02	4.15E-02	4.22E-02
6211.875	3.94E-02	3.98E-02	4.03E-02	4.09E-02	4.14E-02	4.22E-02
6211.825	3.96E-02	4.01E-02	4.05E-02	4.10E-02	4.16E-02	4.22E-02
6211.775	3.98E-02	4.02E-02	4.07E-02	4.13E-02	4.18E-02	4.24E-02
6211.725	3.97E-02	4.03E-02	4.09E-02	4.15E-02	4.20E-02	4.27E-02
6211.675	3.94E-02	4.01E-02	4.08E-02	4.15E-02	4.21E-02	4.28E-02
6211.625	3.89E-02	3.98E-02	4.06E-02	4.13E-02	4.21E-02	4.28E-02
6211.575	3.83E-02	3.92E-02	4.00E-02	4.10E-02	4.18E-02	4.25E-02
6211.525	3.75E-02	3.85E-02	3.94E-02	4.03E-02	4.12E-02	4.20E-02
6211.475	3.68E-02	3.77E-02	3.87E-02	3.96E-02	4.05E-02	4.13E-02
6211.425	3.61E-02	3.71E-02	3.79E-02	3.88E-02	3.97E-02	4.05E-02
6211.375	3.55E-02	3.63E-02	3.72E-02	3.80E-02	3.87E-02	3.96E-02
6211.325	3.51E-02	3.58E-02	3.65E-02	3.71E-02	3.79E-02	3.87E-02
6211.275	3.47E-02	3.53E-02	3.59E-02	3.66E-02	3.73E-02	3.79E-02
6211.225	3.46E-02	3.51E-02	3.57E-02	3.63E-02	3.69E-02	3.76E-02
6211.175	3.46E-02	3.52E-02	3.57E-02	3.62E-02	3.68E-02	3.74E-02
6211.125	3.49E-02	3.54E-02	3.59E-02	3.64E-02	3.70E-02	3.73E-02
6211.075	3.52E-02	3.58E-02	3.62E-02	3.67E-02	3.71E-02	3.75E-02
6211.025	3.55E-02	3.60E-02	3.65E-02	3.70E-02	3.74E-02	3.78E-02
6210.975	3.57E-02	3.63E-02	3.68E-02	3.73E-02	3.77E-02	3.80E-02
6210.925	3.58E-02	3.64E-02	3.69E-02	3.74E-02	3.79E-02	3.82E-02



APPENDIX B Dispersion Modelling

6210.875	3.58E-02	3.63E-02	3.69E-02	3.74E-02	3.79E-02	3.83E-02
6210.825	3.59E-02	3.64E-02	3.69E-02	3.75E-02	3.81E-02	3.86E-02
6210.775	3.59E-02	3.65E-02	3.71E-02	3.76E-02	3.82E-02	3.89E-02
6210.725	3.60E-02	3.66E-02	3.71E-02	3.77E-02	3.83E-02	3.92E-02
6210.675	3.61E-02	3.66E-02	3.72E-02	3.78E-02	3.86E-02	3.93E-02
6210.625	3.62E-02	3.68E-02	3.74E-02	3.80E-02	3.86E-02	3.93E-02
6210.575	3.66E-02	3.72E-02	3.77E-02	3.83E-02	3.88E-02	3.95E-02
6210.525	3.71E-02	3.77E-02	3.81E-02	3.86E-02	3.93E-02	3.98E-02
6210.475	3.78E-02	3.83E-02	3.88E-02	3.92E-02	3.98E-02	4.04E-02
6210.425	3.85E-02	3.90E-02	3.94E-02	4.00E-02	4.05E-02	4.12E-02
6210.375	3.93E-02	3.97E-02	4.02E-02	4.07E-02	4.13E-02	4.20E-02
6210.325	4.01E-02	4.06E-02	4.10E-02	4.15E-02	4.22E-02	4.27E-02
6210.275	4.08E-02	4.13E-02	4.18E-02	4.23E-02	4.28E-02	4.34E-02
6210.225	4.13E-02	4.18E-02	4.24E-02	4.29E-02	4.35E-02	4.41E-02
6210.175	4.17E-02	4.22E-02	4.28E-02	4.33E-02	4.39E-02	4.45E-02
6210.125	4.20E-02	4.26E-02	4.31E-02	4.37E-02	4.43E-02	4.48E-02
6210.075	4.24E-02	4.29E-02	4.35E-02	4.40E-02	4.46E-02	4.52E-02
6210.025	4.28E-02	4.34E-02	4.39E-02	4.45E-02	4.51E-02	4.57E-02
6209.975	4.33E-02	4.38E-02	4.44E-02	4.50E-02	4.56E-02	4.63E-02
6209.925	4.36E-02	4.43E-02	4.48E-02	4.54E-02	4.61E-02	4.67E-02
6209.875	4.37E-02	4.43E-02	4.49E-02	4.55E-02	4.62E-02	4.69E-02
6209.825	4.34E-02	4.40E-02	4.46E-02	4.52E-02	4.59E-02	4.66E-02
6209.775	4.31E-02	4.37E-02	4.44E-02	4.49E-02	4.56E-02	4.62E-02
6209.725	4.29E-02	4.34E-02	4.40E-02	4.46E-02	4.52E-02	4.59E-02
6209.675	4.25E-02	4.31E-02	4.36E-02	4.42E-02	4.49E-02	4.55E-02
6209.625	4.21E-02	4.27E-02	4.33E-02	4.39E-02	4.45E-02	4.51E-02
6209.575	4.18E-02	4.24E-02	4.29E-02	4.35E-02	4.41E-02	4.46E-02
6209.525	4.13E-02	4.19E-02	4.24E-02	4.30E-02	4.35E-02	4.42E-02
6209.475	4.07E-02	4.13E-02	4.18E-02	4.24E-02	4.29E-02	4.34E-02
6209.425	4.01E-02	4.07E-02	4.12E-02	4.17E-02	4.21E-02	4.26E-02
6209.375	3.92E-02	3.97E-02	4.02E-02	4.07E-02	4.12E-02	4.17E-02
6209.325	3.83E-02	3.87E-02	3.92E-02	3.97E-02	4.03E-02	4.08E-02
6209.275	3.75E-02	3.80E-02	3.85E-02	3.90E-02	3.95E-02	4.01E-02
6209.225	3.71E-02	3.76E-02	3.82E-02	3.86E-02	3.92E-02	3.98E-02
6209.175	3.68E-02	3.73E-02	3.79E-02	3.85E-02	3.91E-02	3.97E-02
6209.125	3.67E-02	3.72E-02	3.78E-02	3.84E-02	3.90E-02	3.96E-02
6209.075	3.68E-02	3.73E-02	3.79E-02	3.85E-02	3.91E-02	3.97E-02
6209.025	3.69E-02	3.74E-02	3.81E-02	3.87E-02	3.92E-02	3.99E-02
6208.975	3.70E-02	3.76E-02	3.82E-02	3.88E-02	3.94E-02	4.01E-02
6208.925	3.72E-02	3.77E-02	3.83E-02	3.89E-02	3.95E-02	4.01E-02
6208.875	3.72E-02	3.77E-02	3.84E-02	3.90E-02	3.96E-02	4.03E-02
6208.825	3.72E-02	3.78E-02	3.83E-02	3.90E-02	3.96E-02	4.03E-02
6208.775	3.72E-02	3.77E-02	3.84E-02	3.90E-02	3.96E-02	4.04E-02
6208.725	3.73E-02	3.78E-02	3.84E-02	3.90E-02	3.96E-02	4.04E-02
6208.675	3.73E-02	3.79E-02	3.85E-02	3.91E-02	3.98E-02	4.06E-02
6208.625	3.75E-02	3.81E-02	3.87E-02	3.95E-02	4.02E-02	4.09E-02
6208.575	3.77E-02	3.84E-02	3.91E-02	4.00E-02	4.07E-02	4.14E-02
6208.525	3.81E-02	3.89E-02	3.96E-02	4.05E-02	4.13E-02	4.21E-02
6208.475	3.87E-02	3.95E-02	4.02E-02	4.10E-02	4.20E-02	4.29E-02
6208.425	3.93E-02	4.01E-02	4.09E-02	4.20E-02	4.28E-02	4.38E-02
6208.375	4.01E-02	4.09E-02	4.19E-02	4.28E-02	4.38E-02	4.49E-02
6208.325	4.08E-02	4.17E-02	4.28E-02	4.38E-02	4.48E-02	4.59E-02
6208.275	4.17E-02	4.27E-02	4.37E-02	4.48E-02	4.59E-02	4.69E-02
6208.225	4.26E-02	4.37E-02	4.47E-02	4.56E-02	4.66E-02	4.75E-02
6208.175	4.34E-02	4.43E-02	4.53E-02	4.60E-02	4.68E-02	4.75E-02
6208.125	4.38E-02	4.46E-02	4.53E-02	4.60E-02	4.66E-02	4.71E-02
6208.075	4.39E-02	4.45E-02	4.50E-02	4.55E-02	4.60E-02	4.65E-02
6208.025	4.36E-02	4.40E-02	4.45E-02	4.48E-02	4.50E-02	4.54E-02
6207.975	4.29E-02	4.32E-02	4.35E-02	4.38E-02	4.41E-02	4.43E-02
6207.925	4.19E-02	4.22E-02	4.25E-02	4.27E-02	4.29E-02	4.33E-02
6207.875	4.09E-02	4.12E-02	4.15E-02	4.18E-02	4.21E-02	4.23E-02
6207.825	4.00E-02	4.03E-02	4.06E-02	4.09E-02	4.12E-02	4.16E-02
6207.775	3.92E-02	3.95E-02	3.98E-02	4.02E-02	4.06E-02	4.09E-02
6207.725	3.86E-02	3.90E-02	3.93E-02	3.97E-02	4.01E-02	4.06E-02
6207.675	3.82E-02	3.86E-02	3.90E-02	3.94E-02	3.98E-02	4.02E-02
6207.625	3.79E-02	3.84E-02	3.87E-02	3.91E-02	3.96E-02	4.00E-02
6207.575	3.77E-02	3.81E-02	3.86E-02	3.90E-02	3.94E-02	3.99E-02
6207.525	3.76E-02	3.80E-02	3.84E-02	3.88E-02	3.93E-02	3.96E-02
6207.475	3.74E-02	3.78E-02	3.83E-02	3.86E-02	3.90E-02	3.96E-02
6207.425	3.73E-02	3.77E-02	3.81E-02	3.86E-02	3.90E-02	3.93E-02
6207.375	3.71E-02	3.76E-02	3.81E-02	3.84E-02	3.88E-02	3.91E-02



APPENDIX B Dispersion Modelling

X (km): 612.675 612.725 612.775 612.825 612.875 612.925

Y (km)

6212.375	4.29E-02	4.33E-02	4.37E-02	4.42E-02	4.46E-02	4.51E-02
6212.325	4.34E-02	4.37E-02	4.42E-02	4.46E-02	4.50E-02	4.55E-02
6212.275	4.38E-02	4.42E-02	4.46E-02	4.50E-02	4.54E-02	4.59E-02
6212.225	4.42E-02	4.47E-02	4.51E-02	4.55E-02	4.59E-02	4.64E-02
6212.175	4.44E-02	4.49E-02	4.54E-02	4.59E-02	4.64E-02	4.68E-02
6212.125	4.43E-02	4.50E-02	4.56E-02	4.62E-02	4.67E-02	4.73E-02
6212.075	4.41E-02	4.48E-02	4.55E-02	4.63E-02	4.69E-02	4.75E-02
6212.025	4.37E-02	4.45E-02	4.54E-02	4.62E-02	4.69E-02	4.77E-02
6211.975	4.33E-02	4.42E-02	4.51E-02	4.60E-02	4.68E-02	4.77E-02
6211.925	4.30E-02	4.39E-02	4.47E-02	4.57E-02	4.66E-02	4.75E-02
6211.875	4.29E-02	4.36E-02	4.44E-02	4.53E-02	4.63E-02	4.72E-02
6211.825	4.28E-02	4.35E-02	4.42E-02	4.50E-02	4.59E-02	4.69E-02
6211.775	4.29E-02	4.35E-02	4.41E-02	4.48E-02	4.56E-02	4.65E-02
6211.725	4.32E-02	4.38E-02	4.44E-02	4.49E-02	4.55E-02	4.63E-02
6211.675	4.35E-02	4.40E-02	4.45E-02	4.51E-02	4.56E-02	4.64E-02
6211.625	4.35E-02	4.41E-02	4.47E-02	4.54E-02	4.59E-02	4.64E-02
6211.575	4.33E-02	4.40E-02	4.47E-02	4.54E-02	4.60E-02	4.66E-02
6211.525	4.29E-02	4.38E-02	4.46E-02	4.53E-02	4.60E-02	4.67E-02
6211.475	4.23E-02	4.32E-02	4.41E-02	4.50E-02	4.58E-02	4.66E-02
6211.425	4.14E-02	4.24E-02	4.35E-02	4.44E-02	4.53E-02	4.63E-02
6211.375	4.05E-02	4.15E-02	4.26E-02	4.36E-02	4.45E-02	4.57E-02
6211.325	3.96E-02	4.06E-02	4.16E-02	4.26E-02	4.37E-02	4.48E-02
6211.275	3.88E-02	3.96E-02	4.06E-02	4.17E-02	4.28E-02	4.40E-02
6211.225	3.82E-02	3.89E-02	3.98E-02	4.08E-02	4.19E-02	4.30E-02
6211.175	3.78E-02	3.84E-02	3.91E-02	4.01E-02	4.11E-02	4.21E-02
6211.125	3.77E-02	3.82E-02	3.88E-02	3.96E-02	4.05E-02	4.15E-02
6211.075	3.79E-02	3.83E-02	3.87E-02	3.94E-02	4.02E-02	4.11E-02
6211.025	3.82E-02	3.85E-02	3.89E-02	3.95E-02	4.02E-02	4.09E-02
6210.975	3.84E-02	3.87E-02	3.92E-02	3.97E-02	4.04E-02	4.11E-02
6210.925	3.85E-02	3.90E-02	3.95E-02	4.02E-02	4.07E-02	4.13E-02
6210.875	3.89E-02	3.94E-02	4.01E-02	4.07E-02	4.13E-02	4.18E-02
6210.825	3.93E-02	3.99E-02	4.06E-02	4.13E-02	4.18E-02	4.23E-02
6210.775	3.96E-02	4.03E-02	4.10E-02	4.18E-02	4.24E-02	4.30E-02
6210.725	3.98E-02	4.04E-02	4.12E-02	4.20E-02	4.27E-02	4.34E-02
6210.675	3.99E-02	4.05E-02	4.11E-02	4.19E-02	4.28E-02	4.34E-02
6210.625	4.01E-02	4.07E-02	4.14E-02	4.20E-02	4.28E-02	4.35E-02
6210.575	4.03E-02	4.11E-02	4.16E-02	4.24E-02	4.30E-02	4.36E-02
6210.525	4.05E-02	4.13E-02	4.20E-02	4.27E-02	4.33E-02	4.40E-02
6210.475	4.10E-02	4.17E-02	4.24E-02	4.30E-02	4.37E-02	4.44E-02
6210.425	4.17E-02	4.23E-02	4.29E-02	4.35E-02	4.42E-02	4.48E-02
6210.375	4.25E-02	4.30E-02	4.36E-02	4.42E-02	4.49E-02	4.55E-02
6210.325	4.33E-02	4.38E-02	4.44E-02	4.50E-02	4.56E-02	4.63E-02
6210.275	4.40E-02	4.46E-02	4.52E-02	4.58E-02	4.65E-02	4.71E-02
6210.225	4.46E-02	4.53E-02	4.58E-02	4.65E-02	4.71E-02	4.78E-02
6210.175	4.51E-02	4.57E-02	4.64E-02	4.70E-02	4.78E-02	4.85E-02
6210.125	4.55E-02	4.61E-02	4.67E-02	4.74E-02	4.82E-02	4.89E-02
6210.075	4.58E-02	4.65E-02	4.72E-02	4.78E-02	4.85E-02	4.92E-02
6210.025	4.63E-02	4.69E-02	4.76E-02	4.82E-02	4.89E-02	4.95E-02
6209.975	4.69E-02	4.75E-02	4.82E-02	4.88E-02	4.95E-02	5.02E-02
6209.925	4.74E-02	4.81E-02	4.87E-02	4.94E-02	5.00E-02	5.07E-02
6209.875	4.75E-02	4.82E-02	4.89E-02	4.96E-02	5.02E-02	5.09E-02
6209.825	4.72E-02	4.80E-02	4.87E-02	4.94E-02	5.00E-02	5.07E-02
6209.775	4.69E-02	4.76E-02	4.84E-02	4.90E-02	4.97E-02	5.04E-02
6209.725	4.66E-02	4.73E-02	4.80E-02	4.87E-02	4.94E-02	5.01E-02
6209.675	4.62E-02	4.69E-02	4.77E-02	4.84E-02	4.90E-02	4.98E-02
6209.625	4.58E-02	4.65E-02	4.72E-02	4.80E-02	4.87E-02	4.95E-02
6209.575	4.53E-02	4.61E-02	4.68E-02	4.74E-02	4.81E-02	4.89E-02
6209.525	4.48E-02	4.54E-02	4.61E-02	4.68E-02	4.75E-02	4.83E-02
6209.475	4.40E-02	4.46E-02	4.53E-02	4.60E-02	4.67E-02	4.75E-02
6209.425	4.31E-02	4.36E-02	4.42E-02	4.49E-02	4.57E-02	4.65E-02
6209.375	4.21E-02	4.26E-02	4.32E-02	4.39E-02	4.47E-02	4.54E-02
6209.325	4.13E-02	4.19E-02	4.25E-02	4.31E-02	4.39E-02	4.46E-02
6209.275	4.07E-02	4.14E-02	4.20E-02	4.27E-02	4.35E-02	4.42E-02
6209.225	4.04E-02	4.10E-02	4.17E-02	4.26E-02	4.33E-02	4.41E-02
6209.175	4.02E-02	4.10E-02	4.17E-02	4.25E-02	4.32E-02	4.41E-02
6209.125	4.04E-02	4.11E-02	4.18E-02	4.25E-02	4.33E-02	4.41E-02



APPENDIX B Dispersion Modelling

6209.075 4.04E-02 4.11E-02 4.20E-02 4.27E-02 4.35E-02 4.44E-02
6209.025 4.05E-02 4.13E-02 4.20E-02 4.28E-02 4.37E-02 4.45E-02
6208.975 4.07E-02 4.14E-02 4.21E-02 4.28E-02 4.37E-02 4.46E-02
6208.925 4.09E-02 4.16E-02 4.22E-02 4.29E-02 4.36E-02 4.46E-02
6208.875 4.09E-02 4.15E-02 4.22E-02 4.29E-02 4.36E-02 4.43E-02
6208.825 4.11E-02 4.17E-02 4.24E-02 4.29E-02 4.36E-02 4.43E-02
6208.775 4.11E-02 4.17E-02 4.23E-02 4.30E-02 4.37E-02 4.45E-02
6208.725 4.11E-02 4.18E-02 4.25E-02 4.32E-02 4.38E-02 4.46E-02
6208.675 4.12E-02 4.20E-02 4.27E-02 4.36E-02 4.44E-02 4.52E-02
6208.625 4.17E-02 4.25E-02 4.33E-02 4.42E-02 4.52E-02 4.61E-02
6208.575 4.22E-02 4.32E-02 4.41E-02 4.50E-02 4.60E-02 4.70E-02
6208.525 4.30E-02 4.40E-02 4.50E-02 4.60E-02 4.71E-02 4.82E-02
6208.475 4.39E-02 4.49E-02 4.60E-02 4.71E-02 4.84E-02 4.94E-02
6208.425 4.49E-02 4.61E-02 4.71E-02 4.83E-02 4.95E-02 5.08E-02
6208.375 4.60E-02 4.71E-02 4.83E-02 4.95E-02 5.06E-02 5.16E-02
6208.325 4.71E-02 4.81E-02 4.92E-02 5.03E-02 5.13E-02 5.21E-02
6208.275 4.79E-02 4.89E-02 4.98E-02 5.06E-02 5.14E-02 5.22E-02
6208.225 4.83E-02 4.91E-02 4.99E-02 5.05E-02 5.10E-02 5.15E-02
6208.175 4.83E-02 4.88E-02 4.94E-02 4.99E-02 5.02E-02 5.05E-02
6208.125 4.77E-02 4.82E-02 4.84E-02 4.88E-02 4.91E-02 4.94E-02
6208.075 4.67E-02 4.71E-02 4.74E-02 4.76E-02 4.79E-02 4.82E-02
6208.025 4.58E-02 4.60E-02 4.62E-02 4.65E-02 4.68E-02 4.71E-02
6207.975 4.46E-02 4.49E-02 4.52E-02 4.55E-02 4.57E-02 4.61E-02
6207.925 4.36E-02 4.39E-02 4.42E-02 4.46E-02 4.49E-02 4.52E-02
6207.875 4.26E-02 4.30E-02 4.34E-02 4.37E-02 4.42E-02 4.47E-02
6207.825 4.19E-02 4.23E-02 4.28E-02 4.33E-02 4.37E-02 4.42E-02
6207.775 4.14E-02 4.19E-02 4.23E-02 4.29E-02 4.33E-02 4.38E-02
6207.725 4.10E-02 4.15E-02 4.20E-02 4.25E-02 4.30E-02 4.35E-02
6207.675 4.07E-02 4.11E-02 4.16E-02 4.22E-02 4.26E-02 4.31E-02
6207.625 4.05E-02 4.10E-02 4.14E-02 4.18E-02 4.24E-02 4.29E-02
6207.575 4.03E-02 4.06E-02 4.12E-02 4.17E-02 4.21E-02 4.26E-02
6207.525 4.01E-02 4.05E-02 4.09E-02 4.14E-02 4.18E-02 4.22E-02
6207.475 3.99E-02 4.03E-02 4.07E-02 4.11E-02 4.14E-02 4.18E-02
6207.425 3.97E-02 4.01E-02 4.03E-02 4.06E-02 4.09E-02 4.11E-02
6207.375 3.93E-02 3.95E-02 3.98E-02 3.99E-02 4.01E-02 4.02E-02

X (km): 612.975 613.025 613.075 613.125 613.175 613.225

Y (km)

6212.375 4.56E-02 4.61E-02 4.67E-02 4.72E-02 4.77E-02 4.81E-02
6212.325 4.60E-02 4.65E-02 4.71E-02 4.77E-02 4.82E-02 4.86E-02
6212.275 4.63E-02 4.69E-02 4.74E-02 4.80E-02 4.86E-02 4.91E-02
6212.225 4.68E-02 4.74E-02 4.79E-02 4.84E-02 4.90E-02 4.95E-02
6212.175 4.73E-02 4.78E-02 4.83E-02 4.88E-02 4.94E-02 5.00E-02
6212.125 4.78E-02 4.82E-02 4.87E-02 4.93E-02 4.99E-02 5.04E-02
6212.075 4.81E-02 4.86E-02 4.92E-02 4.97E-02 5.03E-02 5.09E-02
6212.025 4.84E-02 4.91E-02 4.96E-02 5.02E-02 5.08E-02 5.14E-02
6211.975 4.85E-02 4.93E-02 4.99E-02 5.06E-02 5.12E-02 5.18E-02
6211.925 4.84E-02 4.93E-02 5.01E-02 5.08E-02 5.15E-02 5.22E-02
6211.875 4.83E-02 4.92E-02 5.01E-02 5.10E-02 5.18E-02 5.25E-02
6211.825 4.78E-02 4.89E-02 4.99E-02 5.09E-02 5.18E-02 5.27E-02
6211.775 4.75E-02 4.86E-02 4.96E-02 5.06E-02 5.16E-02 5.27E-02
6211.725 4.73E-02 4.82E-02 4.93E-02 5.03E-02 5.14E-02 5.25E-02
6211.675 4.71E-02 4.80E-02 4.90E-02 5.01E-02 5.11E-02 5.22E-02
6211.625 4.72E-02 4.80E-02 4.88E-02 4.98E-02 5.08E-02 5.19E-02
6211.575 4.73E-02 4.81E-02 4.89E-02 4.98E-02 5.07E-02 5.17E-02
6211.525 4.74E-02 4.82E-02 4.90E-02 4.98E-02 5.07E-02 5.16E-02
6211.475 4.74E-02 4.83E-02 4.91E-02 5.00E-02 5.08E-02 5.17E-02
6211.425 4.72E-02 4.82E-02 4.91E-02 5.00E-02 5.10E-02 5.18E-02
6211.375 4.68E-02 4.78E-02 4.89E-02 4.99E-02 5.09E-02 5.18E-02
6211.325 4.60E-02 4.72E-02 4.84E-02 4.96E-02 5.07E-02 5.18E-02
6211.275 4.52E-02 4.64E-02 4.77E-02 4.90E-02 5.03E-02 5.15E-02
6211.225 4.42E-02 4.56E-02 4.68E-02 4.82E-02 4.96E-02 5.10E-02
6211.175 4.33E-02 4.46E-02 4.59E-02 4.73E-02 4.86E-02 5.02E-02
6211.125 4.26E-02 4.37E-02 4.49E-02 4.62E-02 4.77E-02 4.91E-02
6211.075 4.21E-02 4.31E-02 4.43E-02 4.54E-02 4.67E-02 4.82E-02
6211.025 4.19E-02 4.28E-02 4.38E-02 4.49E-02 4.60E-02 4.73E-02
6210.975 4.19E-02 4.28E-02 4.37E-02 4.46E-02 4.56E-02 4.66E-02
6210.925 4.21E-02 4.28E-02 4.36E-02 4.46E-02 4.54E-02 4.63E-02
6210.875 4.23E-02 4.31E-02 4.39E-02 4.47E-02 4.54E-02 4.63E-02



APPENDIX B Dispersion Modelling

6210.825 4.28E-02 4.35E-02 4.41E-02 4.49E-02 4.57E-02 4.65E-02
6210.775 4.33E-02 4.39E-02 4.47E-02 4.53E-02 4.60E-02 4.69E-02
6210.725 4.38E-02 4.45E-02 4.53E-02 4.59E-02 4.66E-02 4.73E-02
6210.675 4.42E-02 4.49E-02 4.57E-02 4.64E-02 4.71E-02 4.78E-02
6210.625 4.42E-02 4.51E-02 4.59E-02 4.67E-02 4.74E-02 4.82E-02
6210.575 4.45E-02 4.52E-02 4.60E-02 4.68E-02 4.76E-02 4.85E-02
6210.525 4.47E-02 4.54E-02 4.61E-02 4.70E-02 4.78E-02 4.87E-02
6210.475 4.50E-02 4.57E-02 4.65E-02 4.73E-02 4.81E-02 4.89E-02
6210.425 4.55E-02 4.62E-02 4.70E-02 4.77E-02 4.85E-02 4.93E-02
6210.375 4.62E-02 4.69E-02 4.76E-02 4.84E-02 4.91E-02 4.99E-02
6210.325 4.70E-02 4.77E-02 4.84E-02 4.91E-02 4.99E-02 5.07E-02
6210.275 4.78E-02 4.86E-02 4.93E-02 5.00E-02 5.08E-02 5.16E-02
6210.225 4.86E-02 4.93E-02 5.00E-02 5.08E-02 5.16E-02 5.25E-02
6210.175 4.92E-02 5.00E-02 5.07E-02 5.15E-02 5.23E-02 5.32E-02
6210.125 4.96E-02 5.03E-02 5.11E-02 5.19E-02 5.28E-02 5.36E-02
6210.075 4.99E-02 5.06E-02 5.14E-02 5.22E-02 5.31E-02 5.40E-02
6210.025 5.03E-02 5.11E-02 5.18E-02 5.26E-02 5.35E-02 5.44E-02
6209.975 5.09E-02 5.16E-02 5.24E-02 5.32E-02 5.41E-02 5.50E-02
6209.925 5.14E-02 5.22E-02 5.30E-02 5.39E-02 5.47E-02 5.56E-02
6209.875 5.17E-02 5.25E-02 5.33E-02 5.42E-02 5.52E-02 5.62E-02
6209.825 5.15E-02 5.23E-02 5.32E-02 5.42E-02 5.52E-02 5.62E-02
6209.775 5.11E-02 5.19E-02 5.29E-02 5.39E-02 5.49E-02 5.59E-02
6209.725 5.08E-02 5.17E-02 5.27E-02 5.36E-02 5.46E-02 5.56E-02
6209.675 5.06E-02 5.16E-02 5.25E-02 5.34E-02 5.44E-02 5.54E-02
6209.625 5.04E-02 5.13E-02 5.22E-02 5.31E-02 5.41E-02 5.51E-02
6209.575 4.99E-02 5.08E-02 5.17E-02 5.26E-02 5.35E-02 5.46E-02
6209.525 4.92E-02 5.01E-02 5.09E-02 5.18E-02 5.28E-02 5.37E-02
6209.475 4.83E-02 4.92E-02 5.00E-02 5.08E-02 5.17E-02 5.26E-02
6209.425 4.73E-02 4.81E-02 4.89E-02 4.97E-02 5.05E-02 5.13E-02
6209.375 4.63E-02 4.71E-02 4.79E-02 4.87E-02 4.95E-02 5.03E-02
6209.325 4.54E-02 4.63E-02 4.72E-02 4.80E-02 4.88E-02 4.96E-02
6209.275 4.50E-02 4.59E-02 4.67E-02 4.76E-02 4.85E-02 4.93E-02
6209.225 4.49E-02 4.57E-02 4.66E-02 4.74E-02 4.84E-02 4.92E-02
6209.175 4.49E-02 4.59E-02 4.66E-02 4.74E-02 4.82E-02 4.91E-02
6209.125 4.51E-02 4.60E-02 4.68E-02 4.76E-02 4.85E-02 4.93E-02
6209.075 4.52E-02 4.61E-02 4.70E-02 4.78E-02 4.86E-02 4.95E-02
6209.025 4.53E-02 4.62E-02 4.70E-02 4.79E-02 4.88E-02 4.96E-02
6208.975 4.55E-02 4.62E-02 4.70E-02 4.79E-02 4.87E-02 4.97E-02
6208.925 4.53E-02 4.62E-02 4.70E-02 4.79E-02 4.87E-02 4.96E-02
6208.875 4.53E-02 4.61E-02 4.70E-02 4.77E-02 4.86E-02 4.95E-02
6208.825 4.52E-02 4.60E-02 4.69E-02 4.78E-02 4.87E-02 4.96E-02
6208.775 4.52E-02 4.60E-02 4.69E-02 4.79E-02 4.90E-02 5.00E-02
6208.725 4.55E-02 4.64E-02 4.74E-02 4.84E-02 4.96E-02 5.07E-02
6208.675 4.61E-02 4.71E-02 4.82E-02 4.93E-02 5.05E-02 5.18E-02
6208.625 4.70E-02 4.81E-02 4.93E-02 5.05E-02 5.17E-02 5.31E-02
6208.575 4.82E-02 4.92E-02 5.05E-02 5.19E-02 5.32E-02 5.47E-02
6208.525 4.94E-02 5.07E-02 5.19E-02 5.32E-02 5.48E-02 5.61E-02
6208.475 5.07E-02 5.20E-02 5.33E-02 5.46E-02 5.58E-02 5.72E-02
6208.425 5.19E-02 5.31E-02 5.43E-02 5.55E-02 5.64E-02 5.75E-02
6208.375 5.28E-02 5.37E-02 5.47E-02 5.56E-02 5.64E-02 5.71E-02
6208.325 5.30E-02 5.39E-02 5.45E-02 5.51E-02 5.58E-02 5.62E-02
6208.275 5.27E-02 5.33E-02 5.38E-02 5.42E-02 5.47E-02 5.52E-02
6208.225 5.20E-02 5.23E-02 5.27E-02 5.32E-02 5.35E-02 5.39E-02
6208.175 5.09E-02 5.13E-02 5.15E-02 5.19E-02 5.23E-02 5.27E-02
6208.125 4.96E-02 5.00E-02 5.04E-02 5.07E-02 5.11E-02 5.16E-02
6208.075 4.85E-02 4.89E-02 4.92E-02 4.97E-02 5.01E-02 5.06E-02
6208.025 4.74E-02 4.78E-02 4.82E-02 4.87E-02 4.92E-02 4.97E-02
6207.975 4.65E-02 4.69E-02 4.75E-02 4.79E-02 4.85E-02 4.91E-02
6207.925 4.58E-02 4.63E-02 4.68E-02 4.74E-02 4.80E-02 4.85E-02
6207.875 4.52E-02 4.57E-02 4.63E-02 4.69E-02 4.75E-02 4.80E-02
6207.825 4.48E-02 4.53E-02 4.59E-02 4.65E-02 4.70E-02 4.76E-02
6207.775 4.44E-02 4.49E-02 4.54E-02 4.60E-02 4.66E-02 4.71E-02
6207.725 4.40E-02 4.46E-02 4.51E-02 4.56E-02 4.62E-02 4.67E-02
6207.675 4.37E-02 4.42E-02 4.47E-02 4.52E-02 4.58E-02 4.63E-02
6207.625 4.34E-02 4.39E-02 4.43E-02 4.48E-02 4.53E-02 4.57E-02
6207.575 4.30E-02 4.35E-02 4.39E-02 4.44E-02 4.46E-02 4.50E-02
6207.525 4.26E-02 4.30E-02 4.33E-02 4.36E-02 4.38E-02 4.40E-02
6207.475 4.20E-02 4.22E-02 4.25E-02 4.26E-02 4.28E-02 4.30E-02
6207.425 4.12E-02 4.14E-02 4.15E-02 4.17E-02 4.18E-02 4.21E-02
6207.375 4.03E-02 4.04E-02 4.06E-02 4.07E-02 4.10E-02 4.13E-02



APPENDIX B Dispersion Modelling

X (km): 613.275 613.325 613.375 613.425 613.475 613.525

Y (km)						
6212.375	4.85E-02	4.89E-02	4.93E-02	4.98E-02	5.03E-02	5.09E-02
6212.325	4.91E-02	4.95E-02	4.99E-02	5.04E-02	5.08E-02	5.14E-02
6212.275	4.96E-02	5.00E-02	5.05E-02	5.10E-02	5.14E-02	5.20E-02
6212.225	5.01E-02	5.06E-02	5.11E-02	5.16E-02	5.20E-02	5.25E-02
6212.175	5.05E-02	5.11E-02	5.16E-02	5.22E-02	5.27E-02	5.32E-02
6212.125	5.10E-02	5.16E-02	5.22E-02	5.27E-02	5.33E-02	5.38E-02
6212.075	5.15E-02	5.21E-02	5.27E-02	5.33E-02	5.39E-02	5.45E-02
6212.025	5.19E-02	5.26E-02	5.32E-02	5.38E-02	5.45E-02	5.51E-02
6211.975	5.24E-02	5.30E-02	5.36E-02	5.43E-02	5.50E-02	5.57E-02
6211.925	5.28E-02	5.34E-02	5.41E-02	5.48E-02	5.55E-02	5.62E-02
6211.875	5.32E-02	5.39E-02	5.46E-02	5.53E-02	5.60E-02	5.67E-02
6211.825	5.35E-02	5.43E-02	5.50E-02	5.58E-02	5.65E-02	5.72E-02
6211.775	5.36E-02	5.45E-02	5.54E-02	5.62E-02	5.69E-02	5.77E-02
6211.725	5.36E-02	5.46E-02	5.56E-02	5.65E-02	5.74E-02	5.82E-02
6211.675	5.33E-02	5.45E-02	5.56E-02	5.67E-02	5.77E-02	5.86E-02
6211.625	5.30E-02	5.42E-02	5.54E-02	5.66E-02	5.78E-02	5.88E-02
6211.575	5.28E-02	5.39E-02	5.51E-02	5.63E-02	5.76E-02	5.88E-02
6211.525	5.25E-02	5.36E-02	5.48E-02	5.60E-02	5.73E-02	5.86E-02
6211.475	5.25E-02	5.36E-02	5.46E-02	5.57E-02	5.69E-02	5.83E-02
6211.425	5.26E-02	5.36E-02	5.46E-02	5.56E-02	5.67E-02	5.79E-02
6211.375	5.29E-02	5.38E-02	5.48E-02	5.58E-02	5.68E-02	5.79E-02
6211.325	5.29E-02	5.40E-02	5.50E-02	5.61E-02	5.70E-02	5.80E-02
6211.275	5.26E-02	5.40E-02	5.50E-02	5.62E-02	5.73E-02	5.83E-02
6211.225	5.24E-02	5.37E-02	5.49E-02	5.62E-02	5.74E-02	5.86E-02
6211.175	5.16E-02	5.31E-02	5.45E-02	5.59E-02	5.73E-02	5.86E-02
6211.125	5.06E-02	5.21E-02	5.37E-02	5.52E-02	5.68E-02	5.83E-02
6211.075	4.96E-02	5.11E-02	5.27E-02	5.43E-02	5.59E-02	5.75E-02
6211.025	4.86E-02	5.00E-02	5.15E-02	5.31E-02	5.48E-02	5.65E-02
6210.975	4.78E-02	4.91E-02	5.05E-02	5.20E-02	5.35E-02	5.52E-02
6210.925	4.74E-02	4.85E-02	4.97E-02	5.11E-02	5.26E-02	5.41E-02
6210.875	4.73E-02	4.82E-02	4.94E-02	5.05E-02	5.17E-02	5.31E-02
6210.825	4.73E-02	4.83E-02	4.92E-02	5.02E-02	5.13E-02	5.26E-02
6210.775	4.76E-02	4.84E-02	4.93E-02	5.03E-02	5.13E-02	5.23E-02
6210.725	4.81E-02	4.89E-02	4.97E-02	5.06E-02	5.15E-02	5.24E-02
6210.675	4.86E-02	4.94E-02	5.02E-02	5.10E-02	5.19E-02	5.28E-02
6210.625	4.90E-02	4.98E-02	5.07E-02	5.15E-02	5.24E-02	5.34E-02
6210.575	4.93E-02	5.02E-02	5.11E-02	5.19E-02	5.29E-02	5.38E-02
6210.525	4.95E-02	5.04E-02	5.13E-02	5.23E-02	5.32E-02	5.42E-02
6210.475	4.98E-02	5.07E-02	5.16E-02	5.26E-02	5.36E-02	5.46E-02
6210.425	5.01E-02	5.10E-02	5.20E-02	5.29E-02	5.39E-02	5.50E-02
6210.375	5.07E-02	5.16E-02	5.25E-02	5.34E-02	5.44E-02	5.54E-02
6210.325	5.15E-02	5.24E-02	5.32E-02	5.41E-02	5.51E-02	5.60E-02
6210.275	5.24E-02	5.33E-02	5.41E-02	5.50E-02	5.59E-02	5.69E-02
6210.225	5.33E-02	5.42E-02	5.51E-02	5.60E-02	5.70E-02	5.79E-02
6210.175	5.41E-02	5.50E-02	5.59E-02	5.68E-02	5.79E-02	5.88E-02
6210.125	5.46E-02	5.55E-02	5.65E-02	5.75E-02	5.86E-02	5.96E-02
6210.075	5.49E-02	5.59E-02	5.70E-02	5.80E-02	5.91E-02	6.00E-02
6210.025	5.53E-02	5.63E-02	5.73E-02	5.84E-02	5.94E-02	6.05E-02
6209.975	5.59E-02	5.69E-02	5.79E-02	5.89E-02	6.00E-02	6.10E-02
6209.925	5.66E-02	5.76E-02	5.86E-02	5.97E-02	6.08E-02	6.19E-02
6209.875	5.72E-02	5.82E-02	5.92E-02	6.03E-02	6.15E-02	6.26E-02
6209.825	5.73E-02	5.83E-02	5.93E-02	6.04E-02	6.15E-02	6.26E-02
6209.775	5.69E-02	5.79E-02	5.90E-02	6.01E-02	6.12E-02	6.23E-02
6209.725	5.67E-02	5.77E-02	5.88E-02	5.99E-02	6.09E-02	6.19E-02
6209.675	5.64E-02	5.75E-02	5.85E-02	5.95E-02	6.05E-02	6.15E-02
6209.625	5.61E-02	5.72E-02	5.82E-02	5.91E-02	6.01E-02	6.12E-02
6209.575	5.56E-02	5.66E-02	5.75E-02	5.85E-02	5.96E-02	6.05E-02
6209.525	5.47E-02	5.57E-02	5.66E-02	5.75E-02	5.85E-02	5.95E-02
6209.475	5.35E-02	5.44E-02	5.53E-02	5.62E-02	5.72E-02	5.82E-02
6209.425	5.21E-02	5.30E-02	5.40E-02	5.49E-02	5.59E-02	5.68E-02
6209.375	5.11E-02	5.19E-02	5.30E-02	5.39E-02	5.49E-02	5.57E-02
6209.325	5.05E-02	5.14E-02	5.22E-02	5.32E-02	5.41E-02	5.50E-02
6209.275	5.01E-02	5.11E-02	5.19E-02	5.28E-02	5.38E-02	5.46E-02
6209.225	5.00E-02	5.09E-02	5.17E-02	5.27E-02	5.37E-02	5.45E-02
6209.175	5.00E-02	5.10E-02	5.18E-02	5.27E-02	5.37E-02	5.47E-02
6209.125	5.02E-02	5.11E-02	5.20E-02	5.29E-02	5.39E-02	5.48E-02
6209.075	5.05E-02	5.12E-02	5.21E-02	5.30E-02	5.40E-02	5.50E-02



APPENDIX B Dispersion Modelling

6209.025	5.04E-02	5.13E-02	5.22E-02	5.31E-02	5.40E-02	5.50E-02
6208.975	5.05E-02	5.14E-02	5.23E-02	5.31E-02	5.41E-02	5.50E-02
6208.925	5.05E-02	5.13E-02	5.22E-02	5.33E-02	5.43E-02	5.51E-02
6208.875	5.04E-02	5.14E-02	5.23E-02	5.33E-02	5.45E-02	5.54E-02
6208.825	5.05E-02	5.17E-02	5.26E-02	5.37E-02	5.50E-02	5.62E-02
6208.775	5.10E-02	5.22E-02	5.34E-02	5.46E-02	5.58E-02	5.73E-02
6208.725	5.19E-02	5.31E-02	5.45E-02	5.59E-02	5.71E-02	5.88E-02
6208.675	5.31E-02	5.44E-02	5.60E-02	5.75E-02	5.90E-02	6.06E-02
6208.625	5.46E-02	5.61E-02	5.75E-02	5.93E-02	6.08E-02	6.22E-02
6208.575	5.62E-02	5.78E-02	5.92E-02	6.07E-02	6.21E-02	6.33E-02
6208.525	5.75E-02	5.89E-02	6.02E-02	6.13E-02	6.25E-02	6.34E-02
6208.475	5.82E-02	5.93E-02	6.05E-02	6.13E-02	6.21E-02	6.28E-02
6208.425	5.84E-02	5.91E-02	5.99E-02	6.06E-02	6.12E-02	6.17E-02
6208.375	5.78E-02	5.84E-02	5.89E-02	5.95E-02	5.99E-02	6.04E-02
6208.325	5.68E-02	5.73E-02	5.77E-02	5.82E-02	5.87E-02	5.92E-02
6208.275	5.55E-02	5.60E-02	5.65E-02	5.70E-02	5.75E-02	5.79E-02
6208.225	5.44E-02	5.48E-02	5.53E-02	5.58E-02	5.63E-02	5.67E-02
6208.175	5.31E-02	5.36E-02	5.41E-02	5.47E-02	5.52E-02	5.57E-02
6208.125	5.20E-02	5.26E-02	5.31E-02	5.37E-02	5.43E-02	5.48E-02
6208.075	5.11E-02	5.17E-02	5.22E-02	5.28E-02	5.34E-02	5.40E-02
6208.025	5.03E-02	5.09E-02	5.15E-02	5.21E-02	5.27E-02	5.33E-02
6207.975	4.96E-02	5.03E-02	5.09E-02	5.14E-02	5.20E-02	5.26E-02
6207.925	4.91E-02	4.96E-02	5.03E-02	5.08E-02	5.14E-02	5.19E-02
6207.875	4.86E-02	4.92E-02	4.97E-02	5.02E-02	5.07E-02	5.12E-02
6207.825	4.81E-02	4.86E-02	4.91E-02	4.96E-02	5.01E-02	5.05E-02
6207.775	4.77E-02	4.81E-02	4.86E-02	4.91E-02	4.95E-02	4.99E-02
6207.725	4.72E-02	4.77E-02	4.81E-02	4.85E-02	4.88E-02	4.90E-02
6207.675	4.67E-02	4.71E-02	4.74E-02	4.76E-02	4.78E-02	4.79E-02
6207.625	4.61E-02	4.63E-02	4.65E-02	4.67E-02	4.66E-02	4.67E-02
6207.575	4.52E-02	4.54E-02	4.56E-02	4.56E-02	4.56E-02	4.57E-02
6207.525	4.42E-02	4.43E-02	4.45E-02	4.46E-02	4.46E-02	4.49E-02
6207.475	4.32E-02	4.34E-02	4.35E-02	4.36E-02	4.39E-02	4.41E-02
6207.425	4.23E-02	4.25E-02	4.27E-02	4.29E-02	4.32E-02	4.36E-02
6207.375	4.15E-02	4.19E-02	4.22E-02	4.24E-02	4.28E-02	4.31E-02

X (km): 613.575 613.625 613.675 613.725 613.775 613.825

Y (km)

6212.375	5.15E-02	5.23E-02	5.31E-02	5.41E-02	5.51E-02	5.62E-02
6212.325	5.20E-02	5.27E-02	5.35E-02	5.43E-02	5.53E-02	5.64E-02
6212.275	5.25E-02	5.31E-02	5.39E-02	5.46E-02	5.55E-02	5.66E-02
6212.225	5.31E-02	5.37E-02	5.43E-02	5.51E-02	5.59E-02	5.69E-02
6212.175	5.37E-02	5.43E-02	5.49E-02	5.56E-02	5.64E-02	5.73E-02
6212.125	5.43E-02	5.50E-02	5.55E-02	5.61E-02	5.69E-02	5.77E-02
6212.075	5.51E-02	5.56E-02	5.62E-02	5.68E-02	5.75E-02	5.83E-02
6212.025	5.57E-02	5.63E-02	5.69E-02	5.75E-02	5.82E-02	5.90E-02
6211.975	5.64E-02	5.70E-02	5.77E-02	5.83E-02	5.89E-02	5.97E-02
6211.925	5.70E-02	5.77E-02	5.84E-02	5.91E-02	5.98E-02	6.04E-02
6211.875	5.75E-02	5.83E-02	5.90E-02	5.98E-02	6.05E-02	6.12E-02
6211.825	5.80E-02	5.88E-02	5.96E-02	6.05E-02	6.12E-02	6.20E-02
6211.775	5.85E-02	5.93E-02	6.02E-02	6.10E-02	6.19E-02	6.27E-02
6211.725	5.90E-02	5.98E-02	6.07E-02	6.16E-02	6.25E-02	6.34E-02
6211.675	5.95E-02	6.04E-02	6.12E-02	6.22E-02	6.31E-02	6.40E-02
6211.625	5.98E-02	6.08E-02	6.17E-02	6.27E-02	6.37E-02	6.46E-02
6211.575	6.00E-02	6.11E-02	6.22E-02	6.32E-02	6.42E-02	6.52E-02
6211.525	5.99E-02	6.12E-02	6.24E-02	6.36E-02	6.47E-02	6.58E-02
6211.475	5.96E-02	6.10E-02	6.23E-02	6.37E-02	6.50E-02	6.62E-02
6211.425	5.93E-02	6.06E-02	6.21E-02	6.36E-02	6.50E-02	6.64E-02
6211.375	5.90E-02	6.03E-02	6.17E-02	6.33E-02	6.48E-02	6.63E-02
6211.325	5.90E-02	6.02E-02	6.15E-02	6.29E-02	6.44E-02	6.60E-02
6211.275	5.94E-02	6.04E-02	6.15E-02	6.28E-02	6.41E-02	6.57E-02
6211.225	5.97E-02	6.07E-02	6.18E-02	6.29E-02	6.41E-02	6.54E-02
6211.175	5.99E-02	6.11E-02	6.22E-02	6.33E-02	6.43E-02	6.54E-02
6211.125	5.97E-02	6.11E-02	6.23E-02	6.35E-02	6.45E-02	6.56E-02
6211.075	5.92E-02	6.07E-02	6.20E-02	6.33E-02	6.45E-02	6.57E-02
6211.025	5.82E-02	5.99E-02	6.13E-02	6.29E-02	6.42E-02	6.55E-02
6210.975	5.70E-02	5.87E-02	6.05E-02	6.21E-02	6.36E-02	6.50E-02
6210.925	5.58E-02	5.74E-02	5.92E-02	6.08E-02	6.25E-02	6.41E-02
6210.875	5.47E-02	5.63E-02	5.79E-02	5.96E-02	6.11E-02	6.27E-02
6210.825	5.38E-02	5.54E-02	5.68E-02	5.83E-02	5.98E-02	6.14E-02



APPENDIX B Dispersion Modelling

6210.775 5.35E-02 5.48E-02 5.61E-02 5.74E-02 5.87E-02 6.02E-02
6210.725 5.35E-02 5.47E-02 5.58E-02 5.70E-02 5.82E-02 5.96E-02
6210.675 5.38E-02 5.49E-02 5.59E-02 5.70E-02 5.81E-02 5.95E-02
6210.625 5.43E-02 5.53E-02 5.62E-02 5.73E-02 5.86E-02 5.98E-02
6210.575 5.48E-02 5.58E-02 5.68E-02 5.79E-02 5.91E-02 6.04E-02
6210.525 5.53E-02 5.63E-02 5.73E-02 5.85E-02 5.97E-02 6.09E-02
6210.475 5.56E-02 5.67E-02 5.77E-02 5.89E-02 6.01E-02 6.13E-02
6210.425 5.59E-02 5.70E-02 5.81E-02 5.93E-02 6.05E-02 6.18E-02
6210.375 5.64E-02 5.75E-02 5.86E-02 5.97E-02 6.08E-02 6.21E-02
6210.325 5.70E-02 5.81E-02 5.92E-02 6.03E-02 6.14E-02 6.26E-02
6210.275 5.79E-02 5.90E-02 6.01E-02 6.12E-02 6.23E-02 6.34E-02
6210.225 5.88E-02 6.00E-02 6.11E-02 6.22E-02 6.34E-02 6.46E-02
6210.175 5.98E-02 6.09E-02 6.21E-02 6.32E-02 6.45E-02 6.57E-02
6210.125 6.06E-02 6.17E-02 6.28E-02 6.40E-02 6.53E-02 6.66E-02
6210.075 6.12E-02 6.22E-02 6.34E-02 6.45E-02 6.57E-02 6.70E-02
6210.025 6.15E-02 6.26E-02 6.37E-02 6.48E-02 6.61E-02 6.72E-02
6209.975 6.21E-02 6.32E-02 6.43E-02 6.54E-02 6.67E-02 6.79E-02
6209.925 6.29E-02 6.40E-02 6.52E-02 6.64E-02 6.76E-02 6.89E-02
6209.875 6.37E-02 6.48E-02 6.59E-02 6.71E-02 6.84E-02 6.96E-02
6209.825 6.37E-02 6.47E-02 6.59E-02 6.70E-02 6.82E-02 6.96E-02
6209.775 6.33E-02 6.43E-02 6.53E-02 6.64E-02 6.76E-02 6.90E-02
6209.725 6.30E-02 6.40E-02 6.50E-02 6.61E-02 6.73E-02 6.86E-02
6209.675 6.27E-02 6.38E-02 6.49E-02 6.60E-02 6.72E-02 6.83E-02
6209.625 6.23E-02 6.35E-02 6.45E-02 6.57E-02 6.68E-02 6.80E-02
6209.575 6.16E-02 6.27E-02 6.38E-02 6.50E-02 6.62E-02 6.73E-02
6209.525 6.05E-02 6.15E-02 6.26E-02 6.37E-02 6.49E-02 6.61E-02
6209.475 5.91E-02 6.00E-02 6.10E-02 6.21E-02 6.32E-02 6.45E-02
6209.425 5.76E-02 5.86E-02 5.95E-02 6.05E-02 6.17E-02 6.31E-02
6209.375 5.66E-02 5.75E-02 5.84E-02 5.96E-02 6.08E-02 6.20E-02
6209.325 5.59E-02 5.69E-02 5.79E-02 5.90E-02 6.02E-02 6.15E-02
6209.275 5.56E-02 5.67E-02 5.78E-02 5.89E-02 5.99E-02 6.13E-02
6209.225 5.56E-02 5.67E-02 5.77E-02 5.89E-02 6.00E-02 6.13E-02
6209.175 5.57E-02 5.68E-02 5.79E-02 5.89E-02 6.01E-02 6.14E-02
6209.125 5.59E-02 5.69E-02 5.80E-02 5.90E-02 6.03E-02 6.15E-02
6209.075 5.60E-02 5.71E-02 5.81E-02 5.92E-02 6.04E-02 6.16E-02
6209.025 5.60E-02 5.71E-02 5.80E-02 5.92E-02 6.05E-02 6.18E-02
6208.975 5.60E-02 5.70E-02 5.81E-02 5.93E-02 6.08E-02 6.22E-02
6208.925 5.61E-02 5.73E-02 5.85E-02 5.98E-02 6.14E-02 6.29E-02
6208.875 5.65E-02 5.78E-02 5.91E-02 6.07E-02 6.23E-02 6.41E-02
6208.825 5.74E-02 5.88E-02 6.03E-02 6.20E-02 6.37E-02 6.57E-02
6208.775 5.86E-02 6.01E-02 6.19E-02 6.36E-02 6.56E-02 6.76E-02
6208.725 6.03E-02 6.19E-02 6.38E-02 6.55E-02 6.72E-02 6.91E-02
6208.675 6.23E-02 6.38E-02 6.54E-02 6.69E-02 6.83E-02 6.97E-02
6208.625 6.38E-02 6.51E-02 6.62E-02 6.75E-02 6.85E-02 6.92E-02
6208.575 6.44E-02 6.54E-02 6.62E-02 6.69E-02 6.77E-02 6.82E-02
6208.525 6.41E-02 6.48E-02 6.55E-02 6.59E-02 6.65E-02 6.70E-02
6208.475 6.33E-02 6.38E-02 6.44E-02 6.47E-02 6.52E-02 6.58E-02
6208.425 6.22E-02 6.26E-02 6.31E-02 6.36E-02 6.41E-02 6.46E-02
6208.375 6.09E-02 6.14E-02 6.19E-02 6.24E-02 6.31E-02 6.35E-02
6208.325 5.97E-02 6.01E-02 6.07E-02 6.12E-02 6.18E-02 6.24E-02
6208.275 5.84E-02 5.88E-02 5.94E-02 6.00E-02 6.05E-02 6.12E-02
6208.225 5.72E-02 5.77E-02 5.82E-02 5.88E-02 5.94E-02 6.01E-02
6208.175 5.62E-02 5.67E-02 5.71E-02 5.77E-02 5.83E-02 5.88E-02
6208.125 5.53E-02 5.58E-02 5.63E-02 5.68E-02 5.74E-02 5.79E-02
6208.075 5.45E-02 5.50E-02 5.55E-02 5.59E-02 5.64E-02 5.69E-02
6208.025 5.37E-02 5.42E-02 5.47E-02 5.51E-02 5.56E-02 5.60E-02
6207.975 5.31E-02 5.35E-02 5.39E-02 5.43E-02 5.47E-02 5.52E-02
6207.925 5.23E-02 5.27E-02 5.31E-02 5.34E-02 5.39E-02 5.44E-02
6207.875 5.16E-02 5.19E-02 5.22E-02 5.25E-02 5.31E-02 5.36E-02
6207.825 5.08E-02 5.11E-02 5.13E-02 5.18E-02 5.22E-02 5.27E-02
6207.775 5.00E-02 5.02E-02 5.05E-02 5.08E-02 5.13E-02 5.18E-02
6207.725 4.92E-02 4.94E-02 4.96E-02 4.98E-02 5.01E-02 5.05E-02
6207.675 4.81E-02 4.84E-02 4.86E-02 4.87E-02 4.90E-02 4.94E-02
6207.625 4.70E-02 4.72E-02 4.75E-02 4.77E-02 4.79E-02 4.84E-02
6207.575 4.59E-02 4.61E-02 4.65E-02 4.69E-02 4.71E-02 4.76E-02
6207.525 4.50E-02 4.53E-02 4.57E-02 4.62E-02 4.66E-02 4.68E-02
6207.475 4.44E-02 4.47E-02 4.51E-02 4.56E-02 4.59E-02 4.60E-02
6207.425 4.39E-02 4.42E-02 4.46E-02 4.51E-02 4.54E-02 4.55E-02
6207.375 4.36E-02 4.40E-02 4.45E-02 4.48E-02 4.52E-02 4.53E-02



APPENDIX B Dispersion Modelling

X (km): 613.875 613.925 613.975 614.025 614.075 614.125

Y (km)						
6212.375	5.74E-02	5.87E-02	6.00E-02	6.14E-02	6.28E-02	6.43E-02
6212.325	5.75E-02	5.88E-02	6.02E-02	6.15E-02	6.29E-02	6.44E-02
6212.275	5.78E-02	5.90E-02	6.03E-02	6.16E-02	6.30E-02	6.45E-02
6212.225	5.80E-02	5.92E-02	6.04E-02	6.18E-02	6.32E-02	6.46E-02
6212.175	5.83E-02	5.94E-02	6.06E-02	6.19E-02	6.33E-02	6.47E-02
6212.125	5.87E-02	5.97E-02	6.08E-02	6.21E-02	6.34E-02	6.49E-02
6212.075	5.91E-02	6.01E-02	6.11E-02	6.23E-02	6.36E-02	6.50E-02
6212.025	5.97E-02	6.06E-02	6.15E-02	6.26E-02	6.39E-02	6.52E-02
6211.975	6.04E-02	6.12E-02	6.21E-02	6.31E-02	6.43E-02	6.55E-02
6211.925	6.11E-02	6.19E-02	6.27E-02	6.36E-02	6.48E-02	6.59E-02
6211.875	6.19E-02	6.27E-02	6.35E-02	6.43E-02	6.54E-02	6.64E-02
6211.825	6.27E-02	6.35E-02	6.43E-02	6.51E-02	6.61E-02	6.71E-02
6211.775	6.36E-02	6.43E-02	6.51E-02	6.60E-02	6.69E-02	6.78E-02
6211.725	6.43E-02	6.52E-02	6.60E-02	6.69E-02	6.78E-02	6.87E-02
6211.675	6.50E-02	6.59E-02	6.68E-02	6.78E-02	6.87E-02	6.96E-02
6211.625	6.56E-02	6.66E-02	6.76E-02	6.87E-02	6.96E-02	7.06E-02
6211.575	6.62E-02	6.73E-02	6.83E-02	6.94E-02	7.05E-02	7.15E-02
6211.525	6.68E-02	6.79E-02	6.90E-02	7.01E-02	7.13E-02	7.24E-02
6211.475	6.73E-02	6.85E-02	6.96E-02	7.08E-02	7.20E-02	7.33E-02
6211.425	6.77E-02	6.90E-02	7.02E-02	7.15E-02	7.27E-02	7.40E-02
6211.375	6.78E-02	6.93E-02	7.07E-02	7.21E-02	7.34E-02	7.47E-02
6211.325	6.77E-02	6.93E-02	7.09E-02	7.24E-02	7.39E-02	7.53E-02
6211.275	6.73E-02	6.90E-02	7.07E-02	7.25E-02	7.42E-02	7.58E-02
6211.225	6.68E-02	6.85E-02	7.02E-02	7.21E-02	7.41E-02	7.59E-02
6211.175	6.67E-02	6.81E-02	6.97E-02	7.17E-02	7.38E-02	7.57E-02
6211.125	6.68E-02	6.80E-02	6.94E-02	7.13E-02	7.32E-02	7.50E-02
6211.075	6.69E-02	6.79E-02	6.94E-02	7.12E-02	7.28E-02	7.42E-02
6211.025	6.68E-02	6.81E-02	6.95E-02	7.09E-02	7.23E-02	7.38E-02
6210.975	6.66E-02	6.80E-02	6.94E-02	7.07E-02	7.22E-02	7.37E-02
6210.925	6.58E-02	6.76E-02	6.90E-02	7.07E-02	7.23E-02	7.40E-02
6210.875	6.46E-02	6.64E-02	6.83E-02	7.02E-02	7.19E-02	7.39E-02
6210.825	6.32E-02	6.51E-02	6.72E-02	6.92E-02	7.13E-02	7.33E-02
6210.775	6.19E-02	6.37E-02	6.59E-02	6.81E-02	7.04E-02	7.27E-02
6210.725	6.10E-02	6.28E-02	6.48E-02	6.70E-02	6.94E-02	7.16E-02
6210.675	6.09E-02	6.24E-02	6.43E-02	6.63E-02	6.86E-02	7.03E-02
6210.625	6.11E-02	6.24E-02	6.42E-02	6.61E-02	6.81E-02	6.98E-02
6210.575	6.14E-02	6.29E-02	6.45E-02	6.61E-02	6.78E-02	6.96E-02
6210.525	6.21E-02	6.35E-02	6.49E-02	6.65E-02	6.81E-02	6.97E-02
6210.475	6.26E-02	6.40E-02	6.54E-02	6.69E-02	6.85E-02	7.01E-02
6210.425	6.31E-02	6.45E-02	6.59E-02	6.74E-02	6.89E-02	7.05E-02
6210.375	6.34E-02	6.48E-02	6.63E-02	6.79E-02	6.94E-02	7.09E-02
6210.325	6.37E-02	6.51E-02	6.67E-02	6.83E-02	6.98E-02	7.14E-02
6210.275	6.45E-02	6.54E-02	6.69E-02	6.86E-02	7.03E-02	7.19E-02
6210.225	6.56E-02	6.65E-02	6.75E-02	6.89E-02	7.04E-02	7.19E-02
6210.175	6.68E-02	6.78E-02	6.88E-02	6.99E-02	7.13E-02	7.28E-02
6210.125	6.78E-02	6.86E-02	6.97E-02	7.10E-02	7.26E-02	7.38E-02
6210.075	6.81E-02	6.92E-02	7.05E-02	7.19E-02	7.33E-02	7.49E-02
6210.025	6.84E-02	6.97E-02	7.10E-02	7.22E-02	7.37E-02	7.55E-02
6209.975	6.91E-02	7.03E-02	7.16E-02	7.28E-02	7.43E-02	7.59E-02
6209.925	6.99E-02	7.11E-02	7.23E-02	7.36E-02	7.52E-02	7.68E-02
6209.875	7.08E-02	7.19E-02	7.31E-02	7.44E-02	7.60E-02	7.77E-02
6209.825	7.09E-02	7.21E-02	7.34E-02	7.47E-02	7.63E-02	7.78E-02
6209.775	7.06E-02	7.20E-02	7.33E-02	7.47E-02	7.60E-02	7.75E-02
6209.725	7.00E-02	7.14E-02	7.31E-02	7.48E-02	7.62E-02	7.75E-02
6209.675	6.95E-02	7.10E-02	7.25E-02	7.45E-02	7.62E-02	7.74E-02
6209.625	6.93E-02	7.07E-02	7.22E-02	7.39E-02	7.57E-02	7.74E-02
6209.575	6.86E-02	6.99E-02	7.12E-02	7.30E-02	7.48E-02	7.65E-02
6209.525	6.72E-02	6.85E-02	6.97E-02	7.10E-02	7.28E-02	7.49E-02
6209.475	6.56E-02	6.66E-02	6.76E-02	6.92E-02	7.08E-02	7.25E-02
6209.425	6.42E-02	6.52E-02	6.65E-02	6.79E-02	6.95E-02	7.11E-02
6209.375	6.33E-02	6.43E-02	6.58E-02	6.72E-02	6.88E-02	7.06E-02
6209.325	6.28E-02	6.41E-02	6.55E-02	6.69E-02	6.86E-02	7.05E-02
6209.275	6.26E-02	6.41E-02	6.55E-02	6.70E-02	6.87E-02	7.05E-02
6209.225	6.27E-02	6.42E-02	6.57E-02	6.73E-02	6.89E-02	7.05E-02
6209.175	6.29E-02	6.43E-02	6.59E-02	6.74E-02	6.90E-02	7.06E-02
6209.125	6.30E-02	6.44E-02	6.59E-02	6.74E-02	6.90E-02	7.07E-02
6209.075	6.30E-02	6.45E-02	6.59E-02	6.75E-02	6.93E-02	7.09E-02
6209.025	6.32E-02	6.47E-02	6.61E-02	6.79E-02	6.98E-02	7.17E-02



APPENDIX B Dispersion Modelling

6208.975	6.35E-02	6.50E-02	6.67E-02	6.87E-02	7.07E-02	7.29E-02
6208.925	6.44E-02	6.60E-02	6.79E-02	7.00E-02	7.22E-02	7.46E-02
6208.875	6.58E-02	6.76E-02	6.95E-02	7.18E-02	7.40E-02	7.65E-02
6208.825	6.75E-02	6.95E-02	7.14E-02	7.36E-02	7.57E-02	7.78E-02
6208.775	6.94E-02	7.12E-02	7.29E-02	7.48E-02	7.65E-02	7.81E-02
6208.725	7.06E-02	7.21E-02	7.35E-02	7.49E-02	7.59E-02	7.73E-02
6208.675	7.09E-02	7.19E-02	7.28E-02	7.39E-02	7.48E-02	7.60E-02
6208.625	7.02E-02	7.09E-02	7.17E-02	7.27E-02	7.35E-02	7.46E-02
6208.575	6.89E-02	6.96E-02	7.04E-02	7.14E-02	7.24E-02	7.35E-02
6208.525	6.76E-02	6.85E-02	6.93E-02	7.02E-02	7.13E-02	7.23E-02
6208.475	6.66E-02	6.72E-02	6.83E-02	6.91E-02	7.02E-02	7.11E-02
6208.425	6.55E-02	6.61E-02	6.70E-02	6.79E-02	6.89E-02	6.98E-02
6208.375	6.42E-02	6.49E-02	6.57E-02	6.66E-02	6.75E-02	6.82E-02
6208.325	6.30E-02	6.37E-02	6.44E-02	6.52E-02	6.59E-02	6.66E-02
6208.275	6.17E-02	6.25E-02	6.30E-02	6.39E-02	6.45E-02	6.50E-02
6208.225	6.06E-02	6.13E-02	6.18E-02	6.24E-02	6.31E-02	6.36E-02
6208.175	5.96E-02	6.02E-02	6.07E-02	6.13E-02	6.18E-02	6.23E-02
6208.125	5.85E-02	5.91E-02	5.96E-02	6.00E-02	6.06E-02	6.11E-02
6208.075	5.75E-02	5.80E-02	5.85E-02	5.90E-02	5.96E-02	6.04E-02
6208.025	5.65E-02	5.70E-02	5.75E-02	5.82E-02	5.88E-02	5.96E-02
6207.975	5.57E-02	5.62E-02	5.68E-02	5.75E-02	5.81E-02	5.90E-02
6207.925	5.49E-02	5.54E-02	5.60E-02	5.67E-02	5.73E-02	5.80E-02
6207.875	5.41E-02	5.47E-02	5.52E-02	5.56E-02	5.61E-02	5.67E-02
6207.825	5.32E-02	5.35E-02	5.39E-02	5.43E-02	5.46E-02	5.54E-02
6207.775	5.21E-02	5.23E-02	5.26E-02	5.30E-02	5.33E-02	5.38E-02
6207.725	5.09E-02	5.12E-02	5.15E-02	5.18E-02	5.20E-02	5.23E-02
6207.675	4.99E-02	5.03E-02	5.06E-02	5.09E-02	5.08E-02	5.10E-02
6207.625	4.90E-02	4.95E-02	4.99E-02	5.02E-02	5.02E-02	5.01E-02
6207.575	4.82E-02	4.88E-02	4.92E-02	4.95E-02	4.95E-02	4.92E-02
6207.525	4.73E-02	4.79E-02	4.83E-02	4.85E-02	4.85E-02	4.83E-02
6207.475	4.64E-02	4.67E-02	4.71E-02	4.72E-02	4.74E-02	4.73E-02
6207.425	4.57E-02	4.58E-02	4.59E-02	4.60E-02	4.62E-02	4.62E-02
6207.375	4.53E-02	4.52E-02	4.49E-02	4.46E-02	4.44E-02	4.44E-02

X (km): 614.175 614.225 614.275 614.325 614.375 614.425

Y (km)

6212.375	6.59E-02	6.76E-02	6.93E-02	7.12E-02	7.30E-02	7.48E-02
6212.325	6.60E-02	6.76E-02	6.94E-02	7.12E-02	7.31E-02	7.50E-02
6212.275	6.61E-02	6.77E-02	6.94E-02	7.12E-02	7.32E-02	7.51E-02
6212.225	6.62E-02	6.78E-02	6.95E-02	7.13E-02	7.32E-02	7.52E-02
6212.175	6.63E-02	6.79E-02	6.96E-02	7.14E-02	7.33E-02	7.53E-02
6212.125	6.64E-02	6.80E-02	6.97E-02	7.15E-02	7.33E-02	7.53E-02
6212.075	6.66E-02	6.82E-02	6.98E-02	7.16E-02	7.34E-02	7.54E-02
6212.025	6.67E-02	6.83E-02	7.00E-02	7.17E-02	7.36E-02	7.55E-02
6211.975	6.69E-02	6.85E-02	7.01E-02	7.19E-02	7.37E-02	7.57E-02
6211.925	6.72E-02	6.87E-02	7.03E-02	7.20E-02	7.39E-02	7.58E-02
6211.875	6.77E-02	6.91E-02	7.06E-02	7.22E-02	7.40E-02	7.60E-02
6211.825	6.82E-02	6.95E-02	7.09E-02	7.25E-02	7.43E-02	7.62E-02
6211.775	6.89E-02	7.01E-02	7.14E-02	7.29E-02	7.46E-02	7.64E-02
6211.725	6.97E-02	7.08E-02	7.21E-02	7.35E-02	7.50E-02	7.68E-02
6211.675	7.06E-02	7.17E-02	7.29E-02	7.42E-02	7.56E-02	7.72E-02
6211.625	7.16E-02	7.27E-02	7.38E-02	7.50E-02	7.64E-02	7.79E-02
6211.575	7.26E-02	7.37E-02	7.48E-02	7.60E-02	7.73E-02	7.87E-02
6211.525	7.36E-02	7.47E-02	7.59E-02	7.71E-02	7.83E-02	7.97E-02
6211.475	7.45E-02	7.58E-02	7.70E-02	7.82E-02	7.94E-02	8.08E-02
6211.425	7.53E-02	7.67E-02	7.80E-02	7.93E-02	8.06E-02	8.20E-02
6211.375	7.61E-02	7.75E-02	7.89E-02	8.04E-02	8.18E-02	8.32E-02
6211.325	7.68E-02	7.82E-02	7.98E-02	8.13E-02	8.29E-02	8.44E-02
6211.275	7.74E-02	7.89E-02	8.05E-02	8.22E-02	8.39E-02	8.55E-02
6211.225	7.77E-02	7.95E-02	8.12E-02	8.30E-02	8.47E-02	8.65E-02
6211.175	7.76E-02	7.96E-02	8.17E-02	8.36E-02	8.55E-02	8.74E-02
6211.125	7.71E-02	7.95E-02	8.19E-02	8.41E-02	8.61E-02	8.81E-02
6211.075	7.64E-02	7.91E-02	8.15E-02	8.40E-02	8.63E-02	8.86E-02
6211.025	7.58E-02	7.82E-02	8.08E-02	8.33E-02	8.60E-02	8.87E-02
6210.975	7.54E-02	7.75E-02	7.98E-02	8.27E-02	8.55E-02	8.83E-02
6210.925	7.55E-02	7.73E-02	7.95E-02	8.23E-02	8.53E-02	8.77E-02
6210.875	7.55E-02	7.73E-02	7.94E-02	8.20E-02	8.45E-02	8.67E-02
6210.825	7.51E-02	7.71E-02	7.92E-02	8.15E-02	8.38E-02	8.61E-02
6210.775	7.42E-02	7.66E-02	7.86E-02	8.09E-02	8.36E-02	8.59E-02



APPENDIX B Dispersion Modelling

6210.725	7.31E-02	7.52E-02	7.76E-02	8.01E-02	8.29E-02	8.55E-02
6210.675	7.21E-02	7.41E-02	7.64E-02	7.87E-02	8.15E-02	8.45E-02
6210.625	7.14E-02	7.35E-02	7.58E-02	7.75E-02	7.96E-02	8.25E-02
6210.575	7.13E-02	7.32E-02	7.54E-02	7.76E-02	7.93E-02	8.10E-02
6210.525	7.14E-02	7.34E-02	7.56E-02	7.76E-02	7.92E-02	8.14E-02
6210.475	7.18E-02	7.36E-02	7.56E-02	7.77E-02	7.96E-02	8.16E-02
6210.425	7.22E-02	7.41E-02	7.60E-02	7.79E-02	7.99E-02	8.18E-02
6210.375	7.26E-02	7.44E-02	7.62E-02	7.81E-02	8.00E-02	8.18E-02
6210.325	7.30E-02	7.47E-02	7.65E-02	7.80E-02	7.96E-02	8.17E-02
6210.275	7.33E-02	7.51E-02	7.67E-02	7.84E-02	7.98E-02	8.16E-02
6210.225	7.35E-02	7.51E-02	7.70E-02	7.87E-02	8.07E-02	8.24E-02
6210.175	7.44E-02	7.59E-02	7.77E-02	7.94E-02	8.14E-02	8.39E-02
6210.125	7.53E-02	7.68E-02	7.87E-02	8.05E-02	8.28E-02	8.55E-02
6210.075	7.64E-02	7.81E-02	7.96E-02	8.16E-02	8.44E-02	8.73E-02
6210.025	7.72E-02	7.89E-02	8.08E-02	8.28E-02	8.51E-02	8.79E-02
6209.975	7.76E-02	7.95E-02	8.14E-02	8.35E-02	8.57E-02	8.81E-02
6209.925	7.85E-02	8.03E-02	8.22E-02	8.42E-02	8.63E-02	8.86E-02
6209.875	7.94E-02	8.12E-02	8.31E-02	8.52E-02	8.74E-02	8.96E-02
6209.825	7.95E-02	8.14E-02	8.34E-02	8.54E-02	8.76E-02	8.98E-02
6209.775	7.90E-02	8.08E-02	8.27E-02	8.47E-02	8.68E-02	8.91E-02
6209.725	7.89E-02	8.06E-02	8.24E-02	8.44E-02	8.65E-02	8.88E-02
6209.675	7.90E-02	8.07E-02	8.25E-02	8.43E-02	8.64E-02	8.87E-02
6209.625	7.90E-02	8.04E-02	8.24E-02	8.42E-02	8.63E-02	8.84E-02
6209.575	7.81E-02	7.98E-02	8.13E-02	8.31E-02	8.52E-02	8.75E-02
6209.525	7.67E-02	7.85E-02	8.01E-02	8.17E-02	8.39E-02	8.59E-02
6209.475	7.42E-02	7.66E-02	7.87E-02	8.06E-02	8.22E-02	8.39E-02
6209.425	7.29E-02	7.51E-02	7.74E-02	7.94E-02	8.11E-02	8.28E-02
6209.375	7.25E-02	7.46E-02	7.66E-02	7.83E-02	8.04E-02	8.24E-02
6209.325	7.23E-02	7.42E-02	7.59E-02	7.78E-02	7.99E-02	8.20E-02
6209.275	7.23E-02	7.40E-02	7.57E-02	7.78E-02	7.99E-02	8.20E-02
6209.225	7.22E-02	7.40E-02	7.58E-02	7.77E-02	7.98E-02	8.22E-02
6209.175	7.23E-02	7.40E-02	7.58E-02	7.79E-02	8.01E-02	8.27E-02
6209.125	7.23E-02	7.44E-02	7.65E-02	7.85E-02	8.11E-02	8.39E-02
6209.075	7.29E-02	7.51E-02	7.74E-02	8.01E-02	8.29E-02	8.59E-02
6209.025	7.38E-02	7.63E-02	7.90E-02	8.20E-02	8.50E-02	8.85E-02
6208.975	7.55E-02	7.79E-02	8.10E-02	8.40E-02	8.71E-02	9.03E-02
6208.925	7.74E-02	7.99E-02	8.28E-02	8.55E-02	8.83E-02	9.06E-02
6208.875	7.90E-02	8.13E-02	8.37E-02	8.58E-02	8.78E-02	8.94E-02
6208.825	7.99E-02	8.17E-02	8.33E-02	8.49E-02	8.64E-02	8.77E-02
6208.775	7.94E-02	8.09E-02	8.21E-02	8.35E-02	8.48E-02	8.63E-02
6208.725	7.83E-02	7.96E-02	8.07E-02	8.21E-02	8.34E-02	8.49E-02
6208.675	7.69E-02	7.82E-02	7.95E-02	8.10E-02	8.21E-02	8.34E-02
6208.625	7.57E-02	7.71E-02	7.84E-02	7.95E-02	8.07E-02	8.18E-02
6208.575	7.47E-02	7.58E-02	7.70E-02	7.80E-02	7.91E-02	8.01E-02
6208.525	7.34E-02	7.44E-02	7.55E-02	7.64E-02	7.74E-02	7.81E-02
6208.475	7.20E-02	7.29E-02	7.38E-02	7.45E-02	7.53E-02	7.60E-02
6208.425	7.06E-02	7.12E-02	7.19E-02	7.25E-02	7.32E-02	7.38E-02
6208.375	6.89E-02	6.94E-02	7.00E-02	7.06E-02	7.12E-02	7.16E-02
6208.325	6.70E-02	6.76E-02	6.82E-02	6.86E-02	6.92E-02	6.97E-02
6208.275	6.54E-02	6.60E-02	6.64E-02	6.69E-02	6.75E-02	6.82E-02
6208.225	6.40E-02	6.45E-02	6.49E-02	6.55E-02	6.63E-02	6.72E-02
6208.175	6.28E-02	6.33E-02	6.38E-02	6.45E-02	6.55E-02	6.65E-02
6208.125	6.17E-02	6.23E-02	6.30E-02	6.39E-02	6.50E-02	6.60E-02
6208.075	6.10E-02	6.18E-02	6.26E-02	6.35E-02	6.45E-02	6.53E-02
6208.025	6.05E-02	6.13E-02	6.20E-02	6.29E-02	6.36E-02	6.42E-02
6207.975	5.98E-02	6.05E-02	6.11E-02	6.16E-02	6.21E-02	6.25E-02
6207.925	5.89E-02	5.95E-02	5.98E-02	6.00E-02	6.02E-02	6.05E-02
6207.875	5.78E-02	5.80E-02	5.81E-02	5.81E-02	5.83E-02	5.86E-02
6207.825	5.59E-02	5.63E-02	5.65E-02	5.63E-02	5.64E-02	5.67E-02
6207.775	5.44E-02	5.49E-02	5.49E-02	5.46E-02	5.43E-02	5.48E-02
6207.725	5.27E-02	5.31E-02	5.33E-02	5.28E-02	5.26E-02	5.32E-02
6207.675	5.13E-02	5.14E-02	5.16E-02	5.14E-02	5.14E-02	5.20E-02
6207.625	4.99E-02	4.99E-02	5.01E-02	5.00E-02	5.01E-02	5.10E-02
6207.575	4.90E-02	4.85E-02	4.86E-02	4.85E-02	4.89E-02	4.98E-02
6207.525	4.82E-02	4.75E-02	4.72E-02	4.73E-02	4.75E-02	4.82E-02
6207.475	4.72E-02	4.69E-02	4.65E-02	4.62E-02	4.63E-02	4.69E-02
6207.425	4.61E-02	4.59E-02	4.58E-02	4.55E-02	4.54E-02	4.60E-02
6207.375	4.43E-02	4.45E-02	4.45E-02	4.46E-02	4.47E-02	4.53E-02

X (km): 614.475 614.525 614.575 614.625 614.675 614.725



APPENDIX B Dispersion Modelling

Y (km)						
6212.375	7.66E-02	7.83E-02	7.98E-02	8.13E-02	8.26E-02	8.38E-02
6212.325	7.69E-02	7.87E-02	8.05E-02	8.20E-02	8.35E-02	8.48E-02
6212.275	7.71E-02	7.91E-02	8.10E-02	8.27E-02	8.44E-02	8.58E-02
6212.225	7.73E-02	7.94E-02	8.14E-02	8.33E-02	8.51E-02	8.67E-02
6212.175	7.74E-02	7.96E-02	8.17E-02	8.38E-02	8.58E-02	8.76E-02
6212.125	7.75E-02	7.97E-02	8.20E-02	8.42E-02	8.63E-02	8.83E-02
6212.075	7.75E-02	7.98E-02	8.21E-02	8.45E-02	8.68E-02	8.90E-02
6212.025	7.76E-02	7.99E-02	8.22E-02	8.47E-02	8.72E-02	8.96E-02
6211.975	7.77E-02	8.00E-02	8.24E-02	8.48E-02	8.74E-02	9.00E-02
6211.925	7.79E-02	8.01E-02	8.24E-02	8.50E-02	8.76E-02	9.03E-02
6211.875	7.80E-02	8.02E-02	8.26E-02	8.51E-02	8.78E-02	9.05E-02
6211.825	7.82E-02	8.04E-02	8.27E-02	8.52E-02	8.79E-02	9.07E-02
6211.775	7.84E-02	8.05E-02	8.29E-02	8.53E-02	8.80E-02	9.09E-02
6211.725	7.87E-02	8.08E-02	8.31E-02	8.55E-02	8.82E-02	9.10E-02
6211.675	7.91E-02	8.11E-02	8.33E-02	8.57E-02	8.83E-02	9.12E-02
6211.625	7.96E-02	8.15E-02	8.36E-02	8.59E-02	8.85E-02	9.13E-02
6211.575	8.03E-02	8.21E-02	8.41E-02	8.63E-02	8.88E-02	9.15E-02
6211.525	8.12E-02	8.29E-02	8.47E-02	8.68E-02	8.92E-02	9.18E-02
6211.475	8.22E-02	8.38E-02	8.56E-02	8.75E-02	8.97E-02	9.22E-02
6211.425	8.34E-02	8.49E-02	8.66E-02	8.85E-02	9.05E-02	9.27E-02
6211.375	8.47E-02	8.62E-02	8.78E-02	8.95E-02	9.14E-02	9.35E-02
6211.325	8.60E-02	8.75E-02	8.91E-02	9.08E-02	9.26E-02	9.46E-02
6211.275	8.72E-02	8.89E-02	9.05E-02	9.22E-02	9.40E-02	9.59E-02
6211.225	8.83E-02	9.01E-02	9.19E-02	9.37E-02	9.55E-02	9.73E-02
6211.175	8.93E-02	9.12E-02	9.32E-02	9.50E-02	9.70E-02	9.90E-02
6211.125	9.02E-02	9.23E-02	9.43E-02	9.64E-02	9.85E-02	1.01E-01
6211.075	9.09E-02	9.31E-02	9.52E-02	9.74E-02	9.95E-02	1.02E-01
6211.025	9.13E-02	9.35E-02	9.59E-02	9.82E-02	1.00E-01	1.03E-01
6210.975	9.10E-02	9.37E-02	9.61E-02	9.86E-02	1.01E-01	1.04E-01
6210.925	9.02E-02	9.30E-02	9.55E-02	9.83E-02	1.02E-01	1.06E-01
6210.875	8.92E-02	9.17E-02	9.44E-02	9.79E-02	1.02E-01	1.06E-01
6210.825	8.82E-02	9.06E-02	9.45E-02	9.84E-02	1.03E-01	1.07E-01
6210.775	8.90E-02	9.21E-02	9.56E-02	9.91E-02	1.03E-01	1.06E-01
6210.725	8.95E-02	9.31E-02	9.62E-02	9.97E-02	1.03E-01	1.06E-01
6210.675	8.83E-02	9.19E-02	9.63E-02	1.01E-01	1.04E-01	1.07E-01
6210.625	8.57E-02	8.99E-02	9.57E-02	1.00E-01	1.04E-01	1.08E-01
6210.575	8.37E-02	8.74E-02	9.28E-02	9.76E-02	1.02E-01	1.07E-01
6210.525	8.25E-02	8.48E-02	8.85E-02	9.30E-02	9.85E-02	1.04E-01
6210.475	8.30E-02	8.37E-02	8.60E-02	8.98E-02	9.44E-02	9.96E-02
6210.425	8.31E-02	8.41E-02	8.53E-02	8.76E-02	9.16E-02	9.60E-02
6210.375	8.33E-02	8.46E-02	8.54E-02	8.73E-02	9.00E-02	9.37E-02
6210.325	8.34E-02	8.51E-02	8.63E-02	8.79E-02	9.03E-02	9.26E-02
6210.275	8.33E-02	8.47E-02	8.68E-02	8.88E-02	9.10E-02	9.36E-02
6210.225	8.40E-02	8.56E-02	8.77E-02	8.99E-02	9.23E-02	9.47E-02
6210.175	8.59E-02	8.77E-02	8.95E-02	9.20E-02	9.41E-02	9.64E-02
6210.125	8.76E-02	8.91E-02	9.09E-02	9.32E-02	9.59E-02	9.81E-02
6210.075	8.90E-02	9.05E-02	9.24E-02	9.48E-02	9.76E-02	1.00E-01
6210.025	8.99E-02	9.17E-02	9.40E-02	9.65E-02	9.92E-02	1.02E-01
6209.975	9.04E-02	9.26E-02	9.51E-02	9.77E-02	1.01E-01	1.03E-01
6209.925	9.10E-02	9.34E-02	9.59E-02	9.87E-02	1.01E-01	1.05E-01
6209.875	9.20E-02	9.46E-02	9.72E-02	9.99E-02	1.03E-01	1.06E-01
6209.825	9.23E-02	9.49E-02	9.75E-02	1.00E-01	1.04E-01	1.07E-01
6209.775	9.15E-02	9.40E-02	9.67E-02	9.97E-02	1.03E-01	1.06E-01
6209.725	9.11E-02	9.36E-02	9.63E-02	9.93E-02	1.02E-01	1.05E-01
6209.675	9.12E-02	9.38E-02	9.64E-02	9.92E-02	1.02E-01	1.05E-01
6209.625	9.09E-02	9.35E-02	9.58E-02	9.83E-02	1.01E-01	1.04E-01
6209.575	8.98E-02	9.19E-02	9.40E-02	9.62E-02	9.85E-02	1.01E-01
6209.525	8.78E-02	8.99E-02	9.22E-02	9.40E-02	9.65E-02	9.92E-02
6209.475	8.61E-02	8.83E-02	9.04E-02	9.30E-02	9.56E-02	9.86E-02
6209.425	8.51E-02	8.72E-02	8.98E-02	9.23E-02	9.51E-02	9.84E-02
6209.375	8.45E-02	8.69E-02	8.95E-02	9.22E-02	9.50E-02	9.83E-02
6209.325	8.44E-02	8.70E-02	8.94E-02	9.22E-02	9.49E-02	9.80E-02
6209.275	8.44E-02	8.69E-02	8.95E-02	9.24E-02	9.52E-02	9.86E-02
6209.225	8.45E-02	8.73E-02	9.02E-02	9.32E-02	9.64E-02	9.98E-02
6209.175	8.55E-02	8.84E-02	9.16E-02	9.51E-02	9.85E-02	1.02E-01
6209.125	8.70E-02	9.02E-02	9.39E-02	9.76E-02	1.01E-01	1.05E-01
6209.075	8.93E-02	9.25E-02	9.61E-02	9.96E-02	1.03E-01	1.06E-01
6209.025	9.16E-02	9.47E-02	9.73E-02	1.00E-01	1.03E-01	1.05E-01
6208.975	9.32E-02	9.54E-02	9.70E-02	9.86E-02	1.00E-01	1.02E-01



APPENDIX B Dispersion Modelling

6208.925	9.25E-02	9.39E-02	9.50E-02	9.62E-02	9.76E-02	9.95E-02
6208.875	9.09E-02	9.18E-02	9.29E-02	9.41E-02	9.60E-02	9.80E-02
6208.825	8.89E-02	9.02E-02	9.15E-02	9.30E-02	9.46E-02	9.65E-02
6208.775	8.77E-02	8.90E-02	9.04E-02	9.15E-02	9.31E-02	9.48E-02
6208.725	8.64E-02	8.76E-02	8.88E-02	9.02E-02	9.16E-02	9.31E-02
6208.675	8.48E-02	8.59E-02	8.72E-02	8.83E-02	8.96E-02	9.09E-02
6208.625	8.31E-02	8.42E-02	8.52E-02	8.61E-02	8.74E-02	8.87E-02
6208.575	8.11E-02	8.21E-02	8.30E-02	8.39E-02	8.48E-02	8.59E-02
6208.525	7.89E-02	7.98E-02	8.04E-02	8.13E-02	8.21E-02	8.31E-02
6208.475	7.67E-02	7.73E-02	7.78E-02	7.86E-02	7.96E-02	8.09E-02
6208.425	7.44E-02	7.49E-02	7.55E-02	7.64E-02	7.76E-02	7.90E-02
6208.375	7.22E-02	7.29E-02	7.37E-02	7.48E-02	7.61E-02	7.76E-02
6208.325	7.04E-02	7.12E-02	7.24E-02	7.36E-02	7.51E-02	7.64E-02
6208.275	6.91E-02	7.01E-02	7.14E-02	7.30E-02	7.43E-02	7.54E-02
6208.225	6.83E-02	6.94E-02	7.08E-02	7.22E-02	7.34E-02	7.42E-02
6208.175	6.77E-02	6.88E-02	7.01E-02	7.12E-02	7.18E-02	7.22E-02
6208.125	6.71E-02	6.82E-02	6.90E-02	6.94E-02	6.97E-02	6.97E-02
6208.075	6.61E-02	6.67E-02	6.70E-02	6.71E-02	6.70E-02	6.67E-02
6208.025	6.45E-02	6.47E-02	6.47E-02	6.45E-02	6.39E-02	6.36E-02
6207.975	6.26E-02	6.24E-02	6.23E-02	6.18E-02	6.10E-02	6.09E-02
6207.925	6.05E-02	5.99E-02	5.93E-02	5.90E-02	5.89E-02	5.92E-02
6207.875	5.85E-02	5.82E-02	5.71E-02	5.69E-02	5.70E-02	5.77E-02
6207.825	5.68E-02	5.67E-02	5.61E-02	5.56E-02	5.59E-02	5.70E-02
6207.775	5.53E-02	5.53E-02	5.51E-02	5.47E-02	5.51E-02	5.66E-02
6207.725	5.37E-02	5.41E-02	5.41E-02	5.39E-02	5.46E-02	5.61E-02
6207.675	5.26E-02	5.32E-02	5.36E-02	5.34E-02	5.42E-02	5.55E-02
6207.625	5.16E-02	5.24E-02	5.29E-02	5.30E-02	5.36E-02	5.47E-02
6207.575	5.08E-02	5.15E-02	5.23E-02	5.24E-02	5.28E-02	5.39E-02
6207.525	4.94E-02	5.06E-02	5.11E-02	5.12E-02	5.18E-02	5.32E-02
6207.475	4.83E-02	4.92E-02	4.98E-02	5.04E-02	5.11E-02	5.25E-02
6207.425	4.69E-02	4.76E-02	4.88E-02	4.95E-02	5.04E-02	5.18E-02
6207.375	4.61E-02	4.69E-02	4.78E-02	4.88E-02	4.96E-02	5.10E-02

X (km): 614.775 614.825 614.875 614.925 614.975 615.025

Y (km)

6212.375	8.49E-02	8.59E-02	8.68E-02	8.76E-02	8.81E-02	8.84E-02
6212.325	8.60E-02	8.71E-02	8.81E-02	8.90E-02	8.97E-02	9.02E-02
6212.275	8.71E-02	8.83E-02	8.93E-02	9.04E-02	9.13E-02	9.20E-02
6212.225	8.82E-02	8.94E-02	9.06E-02	9.18E-02	9.28E-02	9.38E-02
6212.175	8.92E-02	9.06E-02	9.20E-02	9.32E-02	9.43E-02	9.55E-02
6212.125	9.02E-02	9.18E-02	9.32E-02	9.46E-02	9.59E-02	9.71E-02
6212.075	9.11E-02	9.29E-02	9.45E-02	9.60E-02	9.73E-02	9.86E-02
6212.025	9.19E-02	9.39E-02	9.57E-02	9.74E-02	9.89E-02	1.00E-01
6211.975	9.24E-02	9.48E-02	9.69E-02	9.87E-02	1.00E-01	1.02E-01
6211.925	9.30E-02	9.55E-02	9.78E-02	9.99E-02	1.02E-01	1.03E-01
6211.875	9.34E-02	9.61E-02	9.87E-02	1.01E-01	1.03E-01	1.05E-01
6211.825	9.37E-02	9.66E-02	9.94E-02	1.02E-01	1.04E-01	1.07E-01
6211.775	9.39E-02	9.70E-02	1.00E-01	1.03E-01	1.06E-01	1.08E-01
6211.725	9.41E-02	9.72E-02	1.00E-01	1.04E-01	1.07E-01	1.09E-01
6211.675	9.42E-02	9.74E-02	1.01E-01	1.04E-01	1.08E-01	1.11E-01
6211.625	9.43E-02	9.76E-02	1.01E-01	1.05E-01	1.08E-01	1.12E-01
6211.575	9.45E-02	9.77E-02	1.01E-01	1.05E-01	1.09E-01	1.12E-01
6211.525	9.46E-02	9.78E-02	1.01E-01	1.05E-01	1.09E-01	1.13E-01
6211.475	9.49E-02	9.80E-02	1.01E-01	1.05E-01	1.09E-01	1.13E-01
6211.425	9.53E-02	9.82E-02	1.01E-01	1.05E-01	1.09E-01	1.14E-01
6211.375	9.59E-02	9.86E-02	1.02E-01	1.05E-01	1.09E-01	1.14E-01
6211.325	9.68E-02	9.93E-02	1.02E-01	1.06E-01	1.09E-01	1.14E-01
6211.275	9.80E-02	1.00E-01	1.03E-01	1.06E-01	1.10E-01	1.14E-01
6211.225	9.94E-02	1.02E-01	1.04E-01	1.07E-01	1.10E-01	1.14E-01
6211.175	1.01E-01	1.03E-01	1.06E-01	1.08E-01	1.11E-01	1.15E-01
6211.125	1.03E-01	1.05E-01	1.07E-01	1.10E-01	1.13E-01	1.16E-01
6211.075	1.04E-01	1.07E-01	1.09E-01	1.12E-01	1.14E-01	1.17E-01
6211.025	1.06E-01	1.09E-01	1.11E-01	1.14E-01	1.16E-01	1.19E-01
6210.975	1.08E-01	1.11E-01	1.13E-01	1.16E-01	1.19E-01	1.21E-01
6210.925	1.09E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.24E-01
6210.875	1.10E-01	1.13E-01	1.17E-01	1.20E-01	1.24E-01	1.26E-01
6210.825	1.11E-01	1.14E-01	1.18E-01	1.22E-01	1.25E-01	1.29E-01
6210.775	1.10E-01	1.15E-01	1.19E-01	1.23E-01	1.27E-01	1.30E-01
6210.725	1.10E-01	1.14E-01	1.19E-01	1.23E-01	1.27E-01	1.32E-01



APPENDIX B Dispersion Modelling

6210.675	1.10E-01	1.14E-01	1.18E-01	1.22E-01	1.27E-01	1.32E-01
6210.625	1.11E-01	1.13E-01	1.17E-01	1.20E-01	1.25E-01	1.30E-01
6210.575	1.11E-01	1.15E-01	1.17E-01	1.19E-01	1.23E-01	1.27E-01
6210.525	1.10E-01	1.14E-01	1.17E-01	1.20E-01	1.21E-01	1.25E-01
6210.475	1.06E-01	1.11E-01	1.15E-01	1.19E-01	1.22E-01	1.25E-01
6210.425	1.01E-01	1.06E-01	1.11E-01	1.16E-01	1.21E-01	1.26E-01
6210.375	9.77E-02	1.02E-01	1.06E-01	1.12E-01	1.17E-01	1.25E-01
6210.325	9.62E-02	9.98E-02	1.04E-01	1.08E-01	1.14E-01	1.21E-01
6210.275	9.65E-02	9.99E-02	1.03E-01	1.07E-01	1.12E-01	1.18E-01
6210.225	9.74E-02	1.00E-01	1.04E-01	1.07E-01	1.11E-01	1.16E-01
6210.175	9.87E-02	1.01E-01	1.05E-01	1.09E-01	1.13E-01	1.17E-01
6210.125	1.00E-01	1.03E-01	1.06E-01	1.10E-01	1.14E-01	1.18E-01
6210.075	1.03E-01	1.05E-01	1.08E-01	1.12E-01	1.16E-01	1.20E-01
6210.025	1.05E-01	1.08E-01	1.11E-01	1.15E-01	1.19E-01	1.23E-01
6209.975	1.06E-01	1.10E-01	1.13E-01	1.18E-01	1.22E-01	1.26E-01
6209.925	1.08E-01	1.11E-01	1.15E-01	1.19E-01	1.24E-01	1.28E-01
6209.875	1.09E-01	1.13E-01	1.17E-01	1.21E-01	1.25E-01	1.30E-01
6209.825	1.10E-01	1.14E-01	1.18E-01	1.23E-01	1.27E-01	1.32E-01
6209.775	1.09E-01	1.13E-01	1.18E-01	1.23E-01	1.28E-01	1.32E-01
6209.725	1.09E-01	1.13E-01	1.17E-01	1.22E-01	1.26E-01	1.30E-01
6209.675	1.09E-01	1.13E-01	1.17E-01	1.21E-01	1.24E-01	1.28E-01
6209.625	1.07E-01	1.11E-01	1.14E-01	1.18E-01	1.21E-01	1.26E-01
6209.575	1.04E-01	1.08E-01	1.11E-01	1.16E-01	1.20E-01	1.24E-01
6209.525	1.02E-01	1.06E-01	1.10E-01	1.14E-01	1.19E-01	1.24E-01
6209.475	1.02E-01	1.06E-01	1.09E-01	1.14E-01	1.19E-01	1.24E-01
6209.425	1.02E-01	1.06E-01	1.09E-01	1.14E-01	1.19E-01	1.24E-01
6209.375	1.02E-01	1.05E-01	1.09E-01	1.14E-01	1.18E-01	1.24E-01
6209.325	1.02E-01	1.05E-01	1.09E-01	1.14E-01	1.19E-01	1.24E-01
6209.275	1.02E-01	1.06E-01	1.10E-01	1.15E-01	1.21E-01	1.27E-01
6209.225	1.04E-01	1.08E-01	1.13E-01	1.18E-01	1.24E-01	1.30E-01
6209.175	1.06E-01	1.11E-01	1.16E-01	1.20E-01	1.26E-01	1.30E-01
6209.125	1.09E-01	1.13E-01	1.17E-01	1.20E-01	1.24E-01	1.27E-01
6209.075	1.09E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.25E-01
6209.025	1.07E-01	1.09E-01	1.11E-01	1.14E-01	1.18E-01	1.22E-01
6208.975	1.04E-01	1.06E-01	1.09E-01	1.12E-01	1.15E-01	1.19E-01
6208.925	1.02E-01	1.04E-01	1.07E-01	1.09E-01	1.13E-01	1.16E-01
6208.875	1.00E-01	1.03E-01	1.05E-01	1.08E-01	1.11E-01	1.13E-01
6208.825	9.84E-02	1.01E-01	1.03E-01	1.05E-01	1.08E-01	1.10E-01
6208.775	9.67E-02	9.88E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01
6208.725	9.46E-02	9.62E-02	9.81E-02	1.00E-01	1.02E-01	1.04E-01
6208.675	9.23E-02	9.37E-02	9.53E-02	9.68E-02	9.85E-02	1.00E-01
6208.625	8.99E-02	9.11E-02	9.24E-02	9.40E-02	9.58E-02	9.79E-02
6208.575	8.71E-02	8.83E-02	8.98E-02	9.15E-02	9.34E-02	9.50E-02
6208.525	8.45E-02	8.59E-02	8.77E-02	8.94E-02	9.11E-02	9.19E-02
6208.475	8.25E-02	8.40E-02	8.58E-02	8.75E-02	8.86E-02	8.91E-02
6208.425	8.06E-02	8.23E-02	8.40E-02	8.52E-02	8.59E-02	8.61E-02
6208.375	7.91E-02	8.08E-02	8.20E-02	8.30E-02	8.34E-02	8.33E-02
6208.325	7.78E-02	7.91E-02	7.99E-02	8.05E-02	8.08E-02	8.07E-02
6208.275	7.64E-02	7.71E-02	7.76E-02	7.79E-02	7.80E-02	7.81E-02
6208.225	7.46E-02	7.49E-02	7.48E-02	7.50E-02	7.53E-02	7.58E-02
6208.175	7.22E-02	7.20E-02	7.19E-02	7.22E-02	7.26E-02	7.35E-02
6208.125	6.93E-02	6.92E-02	6.92E-02	6.94E-02	7.01E-02	7.11E-02
6208.075	6.63E-02	6.66E-02	6.72E-02	6.78E-02	6.85E-02	7.02E-02
6208.025	6.37E-02	6.46E-02	6.60E-02	6.73E-02	6.82E-02	7.03E-02
6207.975	6.16E-02	6.30E-02	6.51E-02	6.69E-02	6.81E-02	7.04E-02
6207.925	6.02E-02	6.19E-02	6.46E-02	6.72E-02	6.90E-02	7.09E-02
6207.875	5.96E-02	6.17E-02	6.45E-02	6.73E-02	6.89E-02	7.06E-02
6207.825	5.94E-02	6.16E-02	6.40E-02	6.63E-02	6.82E-02	6.99E-02
6207.775	5.88E-02	6.12E-02	6.32E-02	6.53E-02	6.77E-02	6.97E-02
6207.725	5.81E-02	6.04E-02	6.25E-02	6.48E-02	6.72E-02	6.90E-02
6207.675	5.76E-02	5.93E-02	6.20E-02	6.44E-02	6.63E-02	6.79E-02
6207.625	5.66E-02	5.90E-02	6.16E-02	6.36E-02	6.53E-02	6.68E-02
6207.575	5.63E-02	5.89E-02	6.11E-02	6.27E-02	6.41E-02	6.54E-02
6207.525	5.58E-02	5.82E-02	6.02E-02	6.15E-02	6.24E-02	6.38E-02
6207.475	5.48E-02	5.71E-02	5.86E-02	5.98E-02	6.06E-02	6.28E-02
6207.425	5.35E-02	5.60E-02	5.70E-02	5.77E-02	5.93E-02	6.20E-02
6207.375	5.28E-02	5.45E-02	5.51E-02	5.65E-02	5.82E-02	6.07E-02

X (km): 615.075 615.125 615.175 615.225 615.275 615.325



APPENDIX B Dispersion Modelling

Y (km)						
6212.375	8.86E-02	8.88E-02	8.90E-02	8.88E-02	8.85E-02	8.80E-02
6212.325	9.06E-02	9.08E-02	9.09E-02	9.10E-02	9.07E-02	9.03E-02
6212.275	9.25E-02	9.28E-02	9.30E-02	9.30E-02	9.29E-02	9.26E-02
6212.225	9.44E-02	9.49E-02	9.51E-02	9.52E-02	9.51E-02	9.50E-02
6212.175	9.63E-02	9.69E-02	9.73E-02	9.75E-02	9.75E-02	9.74E-02
6212.125	9.81E-02	9.90E-02	9.96E-02	9.98E-02	9.99E-02	9.98E-02
6212.075	9.99E-02	1.01E-01	1.02E-01	1.02E-01	1.02E-01	1.02E-01
6212.025	1.02E-01	1.03E-01	1.04E-01	1.04E-01	1.05E-01	1.05E-01
6211.975	1.03E-01	1.05E-01	1.06E-01	1.07E-01	1.07E-01	1.08E-01
6211.925	1.05E-01	1.06E-01	1.08E-01	1.09E-01	1.10E-01	1.11E-01
6211.875	1.07E-01	1.08E-01	1.10E-01	1.11E-01	1.12E-01	1.13E-01
6211.825	1.09E-01	1.10E-01	1.12E-01	1.13E-01	1.15E-01	1.16E-01
6211.775	1.10E-01	1.12E-01	1.14E-01	1.16E-01	1.17E-01	1.19E-01
6211.725	1.12E-01	1.14E-01	1.16E-01	1.18E-01	1.20E-01	1.21E-01
6211.675	1.13E-01	1.16E-01	1.18E-01	1.20E-01	1.22E-01	1.24E-01
6211.625	1.15E-01	1.18E-01	1.20E-01	1.23E-01	1.25E-01	1.27E-01
6211.575	1.16E-01	1.19E-01	1.22E-01	1.25E-01	1.27E-01	1.30E-01
6211.525	1.17E-01	1.21E-01	1.24E-01	1.27E-01	1.30E-01	1.33E-01
6211.475	1.18E-01	1.22E-01	1.26E-01	1.29E-01	1.32E-01	1.35E-01
6211.425	1.18E-01	1.23E-01	1.27E-01	1.31E-01	1.35E-01	1.38E-01
6211.375	1.18E-01	1.23E-01	1.28E-01	1.32E-01	1.36E-01	1.40E-01
6211.325	1.18E-01	1.23E-01	1.29E-01	1.33E-01	1.38E-01	1.43E-01
6211.275	1.18E-01	1.24E-01	1.29E-01	1.34E-01	1.40E-01	1.45E-01
6211.225	1.19E-01	1.24E-01	1.29E-01	1.35E-01	1.41E-01	1.46E-01
6211.175	1.19E-01	1.24E-01	1.29E-01	1.35E-01	1.42E-01	1.48E-01
6211.125	1.20E-01	1.24E-01	1.29E-01	1.35E-01	1.42E-01	1.49E-01
6211.075	1.21E-01	1.25E-01	1.30E-01	1.35E-01	1.42E-01	1.49E-01
6211.025	1.22E-01	1.26E-01	1.30E-01	1.36E-01	1.42E-01	1.49E-01
6210.975	1.24E-01	1.27E-01	1.32E-01	1.36E-01	1.41E-01	1.49E-01
6210.925	1.26E-01	1.30E-01	1.33E-01	1.37E-01	1.41E-01	1.48E-01
6210.875	1.29E-01	1.32E-01	1.34E-01	1.39E-01	1.41E-01	1.45E-01
6210.825	1.32E-01	1.33E-01	1.35E-01	1.41E-01	1.44E-01	1.44E-01
6210.775	1.33E-01	1.35E-01	1.37E-01	1.43E-01	1.45E-01	1.46E-01
6210.725	1.34E-01	1.34E-01	1.39E-01	1.45E-01	1.46E-01	1.47E-01
6210.675	1.35E-01	1.37E-01	1.37E-01	1.43E-01	1.47E-01	1.48E-01
6210.625	1.34E-01	1.38E-01	1.39E-01	1.43E-01	1.47E-01	1.51E-01
6210.575	1.32E-01	1.36E-01	1.39E-01	1.44E-01	1.49E-01	1.53E-01
6210.525	1.29E-01	1.33E-01	1.38E-01	1.44E-01	1.51E-01	1.56E-01
6210.475	1.29E-01	1.33E-01	1.37E-01	1.44E-01	1.50E-01	1.57E-01
6210.425	1.30E-01	1.34E-01	1.39E-01	1.44E-01	1.50E-01	1.57E-01
6210.375	1.31E-01	1.37E-01	1.44E-01	1.48E-01	1.54E-01	1.60E-01
6210.325	1.29E-01	1.37E-01	1.44E-01	1.52E-01	1.59E-01	1.64E-01
6210.275	1.25E-01	1.33E-01	1.41E-01	1.50E-01	1.58E-01	1.66E-01
6210.225	1.22E-01	1.28E-01	1.36E-01	1.43E-01	1.52E-01	1.60E-01
6210.175	1.22E-01	1.27E-01	1.33E-01	1.39E-01	1.46E-01	1.53E-01
6210.125	1.23E-01	1.28E-01	1.33E-01	1.40E-01	1.46E-01	1.52E-01
6210.075	1.25E-01	1.30E-01	1.35E-01	1.42E-01	1.49E-01	1.54E-01
6210.025	1.28E-01	1.33E-01	1.38E-01	1.45E-01	1.51E-01	1.58E-01
6209.975	1.31E-01	1.37E-01	1.42E-01	1.48E-01	1.55E-01	1.63E-01
6209.925	1.34E-01	1.40E-01	1.45E-01	1.52E-01	1.60E-01	1.67E-01
6209.875	1.35E-01	1.41E-01	1.48E-01	1.55E-01	1.62E-01	1.71E-01
6209.825	1.37E-01	1.43E-01	1.50E-01	1.57E-01	1.65E-01	1.73E-01
6209.775	1.36E-01	1.42E-01	1.48E-01	1.55E-01	1.63E-01	1.71E-01
6209.725	1.35E-01	1.40E-01	1.46E-01	1.53E-01	1.60E-01	1.68E-01
6209.675	1.33E-01	1.38E-01	1.43E-01	1.50E-01	1.56E-01	1.64E-01
6209.625	1.30E-01	1.35E-01	1.40E-01	1.46E-01	1.52E-01	1.60E-01
6209.575	1.28E-01	1.32E-01	1.37E-01	1.43E-01	1.50E-01	1.58E-01
6209.525	1.28E-01	1.32E-01	1.38E-01	1.44E-01	1.51E-01	1.59E-01
6209.475	1.28E-01	1.33E-01	1.39E-01	1.45E-01	1.53E-01	1.61E-01
6209.425	1.28E-01	1.34E-01	1.40E-01	1.47E-01	1.55E-01	1.64E-01
6209.375	1.29E-01	1.35E-01	1.42E-01	1.49E-01	1.59E-01	1.68E-01
6209.325	1.30E-01	1.37E-01	1.45E-01	1.54E-01	1.63E-01	1.71E-01
6209.275	1.34E-01	1.41E-01	1.48E-01	1.56E-01	1.63E-01	1.68E-01
6209.225	1.36E-01	1.42E-01	1.48E-01	1.53E-01	1.58E-01	1.63E-01
6209.175	1.34E-01	1.39E-01	1.44E-01	1.48E-01	1.53E-01	1.57E-01
6209.125	1.31E-01	1.35E-01	1.39E-01	1.44E-01	1.48E-01	1.51E-01
6209.075	1.28E-01	1.32E-01	1.35E-01	1.38E-01	1.40E-01	1.42E-01
6209.025	1.25E-01	1.28E-01	1.30E-01	1.32E-01	1.33E-01	1.35E-01
6208.975	1.21E-01	1.23E-01	1.25E-01	1.27E-01	1.28E-01	1.30E-01
6208.925	1.18E-01	1.20E-01	1.22E-01	1.24E-01	1.25E-01	1.26E-01



APPENDIX B Dispersion Modelling

6208.875	1.15E-01	1.17E-01	1.19E-01	1.21E-01	1.22E-01	1.23E-01
6208.825	1.12E-01	1.14E-01	1.16E-01	1.17E-01	1.18E-01	1.20E-01
6208.775	1.09E-01	1.11E-01	1.13E-01	1.14E-01	1.14E-01	1.15E-01
6208.725	1.06E-01	1.08E-01	1.10E-01	1.10E-01	1.09E-01	1.09E-01
6208.675	1.02E-01	1.04E-01	1.06E-01	1.05E-01	1.04E-01	1.03E-01
6208.625	9.92E-02	1.00E-01	1.00E-01	9.93E-02	9.83E-02	9.82E-02
6208.575	9.56E-02	9.58E-02	9.51E-02	9.45E-02	9.42E-02	9.50E-02
6208.525	9.21E-02	9.16E-02	9.09E-02	9.08E-02	9.13E-02	9.33E-02
6208.475	8.85E-02	8.78E-02	8.78E-02	8.84E-02	8.99E-02	9.24E-02
6208.425	8.55E-02	8.51E-02	8.55E-02	8.68E-02	8.89E-02	9.18E-02
6208.375	8.31E-02	8.31E-02	8.39E-02	8.54E-02	8.75E-02	9.05E-02
6208.325	8.07E-02	8.13E-02	8.22E-02	8.37E-02	8.61E-02	8.91E-02
6208.275	7.84E-02	7.90E-02	8.06E-02	8.21E-02	8.44E-02	8.67E-02
6208.225	7.63E-02	7.75E-02	7.91E-02	8.07E-02	8.27E-02	8.50E-02
6208.175	7.44E-02	7.63E-02	7.84E-02	8.04E-02	8.24E-02	8.49E-02
6208.125	7.31E-02	7.52E-02	7.75E-02	7.97E-02	8.19E-02	8.48E-02
6208.075	7.22E-02	7.43E-02	7.68E-02	7.93E-02	8.12E-02	8.42E-02
6208.025	7.23E-02	7.46E-02	7.75E-02	8.00E-02	8.23E-02	8.44E-02
6207.975	7.28E-02	7.50E-02	7.77E-02	8.00E-02	8.25E-02	8.43E-02
6207.925	7.27E-02	7.46E-02	7.69E-02	7.94E-02	8.14E-02	8.30E-02
6207.875	7.20E-02	7.36E-02	7.57E-02	7.76E-02	7.92E-02	8.08E-02
6207.825	7.13E-02	7.28E-02	7.43E-02	7.59E-02	7.76E-02	7.96E-02
6207.775	7.12E-02	7.25E-02	7.37E-02	7.51E-02	7.68E-02	7.92E-02
6207.725	7.06E-02	7.17E-02	7.26E-02	7.41E-02	7.62E-02	7.89E-02
6207.675	6.95E-02	7.06E-02	7.18E-02	7.36E-02	7.61E-02	7.92E-02
6207.625	6.82E-02	6.95E-02	7.10E-02	7.33E-02	7.62E-02	7.93E-02
6207.575	6.69E-02	6.85E-02	7.02E-02	7.30E-02	7.58E-02	7.89E-02
6207.525	6.58E-02	6.78E-02	7.02E-02	7.29E-02	7.57E-02	7.85E-02
6207.475	6.49E-02	6.72E-02	6.99E-02	7.25E-02	7.53E-02	7.77E-02
6207.425	6.43E-02	6.65E-02	6.91E-02	7.19E-02	7.46E-02	7.65E-02
6207.375	6.33E-02	6.57E-02	6.81E-02	7.13E-02	7.38E-02	7.43E-02

X (km): 615.375 615.425 615.475 615.525 615.575 615.625

Y (km)

6212.375	8.74E-02	8.72E-02	8.75E-02	8.87E-02	9.06E-02	9.30E-02
6212.325	8.97E-02	8.93E-02	8.94E-02	9.03E-02	9.20E-02	9.43E-02
6212.275	9.21E-02	9.16E-02	9.15E-02	9.20E-02	9.34E-02	9.57E-02
6212.225	9.46E-02	9.41E-02	9.38E-02	9.40E-02	9.51E-02	9.71E-02
6212.175	9.71E-02	9.67E-02	9.62E-02	9.61E-02	9.69E-02	9.87E-02
6212.125	9.97E-02	9.94E-02	9.89E-02	9.85E-02	9.89E-02	1.00E-01
6212.075	1.02E-01	1.02E-01	1.02E-01	1.01E-01	1.01E-01	1.02E-01
6212.025	1.05E-01	1.05E-01	1.04E-01	1.04E-01	1.04E-01	1.05E-01
6211.975	1.08E-01	1.08E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
6211.925	1.11E-01	1.11E-01	1.11E-01	1.10E-01	1.10E-01	1.10E-01
6211.875	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.13E-01
6211.825	1.17E-01	1.17E-01	1.18E-01	1.18E-01	1.17E-01	1.17E-01
6211.775	1.20E-01	1.21E-01	1.21E-01	1.21E-01	1.21E-01	1.21E-01
6211.725	1.23E-01	1.24E-01	1.25E-01	1.25E-01	1.25E-01	1.24E-01
6211.675	1.26E-01	1.27E-01	1.28E-01	1.29E-01	1.29E-01	1.29E-01
6211.625	1.29E-01	1.30E-01	1.32E-01	1.33E-01	1.33E-01	1.33E-01
6211.575	1.32E-01	1.34E-01	1.35E-01	1.36E-01	1.37E-01	1.37E-01
6211.525	1.35E-01	1.37E-01	1.39E-01	1.40E-01	1.41E-01	1.42E-01
6211.475	1.38E-01	1.40E-01	1.42E-01	1.44E-01	1.46E-01	1.47E-01
6211.425	1.41E-01	1.44E-01	1.46E-01	1.48E-01	1.50E-01	1.51E-01
6211.375	1.44E-01	1.47E-01	1.50E-01	1.53E-01	1.55E-01	1.56E-01
6211.325	1.47E-01	1.50E-01	1.54E-01	1.57E-01	1.59E-01	1.61E-01
6211.275	1.49E-01	1.54E-01	1.57E-01	1.61E-01	1.64E-01	1.66E-01
6211.225	1.52E-01	1.56E-01	1.61E-01	1.65E-01	1.69E-01	1.72E-01
6211.175	1.54E-01	1.59E-01	1.64E-01	1.69E-01	1.73E-01	1.77E-01
6211.125	1.55E-01	1.62E-01	1.67E-01	1.73E-01	1.78E-01	1.82E-01
6211.075	1.56E-01	1.63E-01	1.70E-01	1.76E-01	1.82E-01	1.87E-01
6211.025	1.57E-01	1.65E-01	1.72E-01	1.78E-01	1.84E-01	1.91E-01
6210.975	1.57E-01	1.65E-01	1.73E-01	1.81E-01	1.87E-01	1.95E-01
6210.925	1.56E-01	1.65E-01	1.74E-01	1.82E-01	1.89E-01	1.96E-01
6210.875	1.53E-01	1.61E-01	1.72E-01	1.82E-01	1.90E-01	1.97E-01
6210.825	1.50E-01	1.58E-01	1.69E-01	1.80E-01	1.91E-01	1.98E-01
6210.775	1.48E-01	1.56E-01	1.66E-01	1.77E-01	1.89E-01	1.99E-01
6210.725	1.47E-01	1.54E-01	1.64E-01	1.74E-01	1.86E-01	1.98E-01
6210.675	1.50E-01	1.55E-01	1.62E-01	1.72E-01	1.83E-01	1.96E-01



APPENDIX B Dispersion Modelling

6210.625	1.54E-01	1.57E-01	1.63E-01	1.71E-01	1.81E-01	1.93E-01
6210.575	1.57E-01	1.62E-01	1.67E-01	1.72E-01	1.80E-01	1.91E-01
6210.525	1.61E-01	1.66E-01	1.70E-01	1.76E-01	1.83E-01	1.92E-01
6210.475	1.64E-01	1.70E-01	1.75E-01	1.81E-01	1.88E-01	1.96E-01
6210.425	1.65E-01	1.73E-01	1.80E-01	1.86E-01	1.94E-01	2.01E-01
6210.375	1.66E-01	1.74E-01	1.84E-01	1.93E-01	2.00E-01	2.08E-01
6210.325	1.69E-01	1.76E-01	1.86E-01	1.97E-01	2.06E-01	2.16E-01
6210.275	1.74E-01	1.82E-01	1.92E-01	2.00E-01	2.10E-01	2.22E-01
6210.225	1.70E-01	1.83E-01	1.95E-01	2.06E-01	2.13E-01	2.23E-01
6210.175	1.62E-01	1.73E-01	1.87E-01	2.02E-01	2.14E-01	2.28E-01
6210.125	1.59E-01	1.68E-01	1.79E-01	1.92E-01	2.08E-01	2.27E-01
6210.075	1.61E-01	1.70E-01	1.79E-01	1.90E-01	2.03E-01	2.20E-01
6210.025	1.65E-01	1.74E-01	1.83E-01	1.94E-01	2.06E-01	2.20E-01
6209.975	1.70E-01	1.78E-01	1.89E-01	2.00E-01	2.12E-01	2.27E-01
6209.925	1.76E-01	1.85E-01	1.95E-01	2.06E-01	2.20E-01	2.36E-01
6209.875	1.80E-01	1.90E-01	2.01E-01	2.13E-01	2.28E-01	2.44E-01
6209.825	1.83E-01	1.94E-01	2.06E-01	2.20E-01	2.35E-01	2.53E-01
6209.775	1.81E-01	1.92E-01	2.04E-01	2.18E-01	2.34E-01	2.53E-01
6209.725	1.78E-01	1.88E-01	1.99E-01	2.12E-01	2.27E-01	2.44E-01
6209.675	1.73E-01	1.82E-01	1.92E-01	2.04E-01	2.18E-01	2.33E-01
6209.625	1.67E-01	1.77E-01	1.87E-01	1.99E-01	2.13E-01	2.29E-01
6209.575	1.66E-01	1.76E-01	1.87E-01	1.99E-01	2.13E-01	2.29E-01
6209.525	1.68E-01	1.77E-01	1.88E-01	2.01E-01	2.17E-01	2.34E-01
6209.475	1.70E-01	1.81E-01	1.93E-01	2.06E-01	2.22E-01	2.42E-01
6209.425	1.75E-01	1.86E-01	1.99E-01	2.14E-01	2.28E-01	2.41E-01
6209.375	1.80E-01	1.91E-01	2.01E-01	2.10E-01	2.18E-01	2.26E-01
6209.325	1.80E-01	1.87E-01	1.93E-01	1.99E-01	2.05E-01	2.13E-01
6209.275	1.73E-01	1.78E-01	1.84E-01	1.89E-01	1.94E-01	2.00E-01
6209.225	1.66E-01	1.71E-01	1.77E-01	1.80E-01	1.84E-01	1.88E-01
6209.175	1.61E-01	1.64E-01	1.67E-01	1.69E-01	1.73E-01	1.77E-01
6209.125	1.53E-01	1.55E-01	1.57E-01	1.60E-01	1.63E-01	1.67E-01
6209.075	1.44E-01	1.46E-01	1.49E-01	1.52E-01	1.55E-01	1.59E-01
6209.025	1.37E-01	1.40E-01	1.42E-01	1.46E-01	1.49E-01	1.51E-01
6208.975	1.32E-01	1.35E-01	1.38E-01	1.41E-01	1.42E-01	1.42E-01
6208.925	1.28E-01	1.31E-01	1.33E-01	1.34E-01	1.35E-01	1.36E-01
6208.875	1.25E-01	1.27E-01	1.27E-01	1.27E-01	1.28E-01	1.31E-01
6208.825	1.20E-01	1.21E-01	1.20E-01	1.21E-01	1.24E-01	1.29E-01
6208.775	1.15E-01	1.14E-01	1.15E-01	1.16E-01	1.20E-01	1.26E-01
6208.725	1.09E-01	1.08E-01	1.10E-01	1.13E-01	1.18E-01	1.25E-01
6208.675	1.03E-01	1.04E-01	1.07E-01	1.11E-01	1.17E-01	1.24E-01
6208.625	9.96E-02	1.02E-01	1.06E-01	1.12E-01	1.17E-01	1.24E-01
6208.575	9.73E-02	1.01E-01	1.06E-01	1.12E-01	1.18E-01	1.24E-01
6208.525	9.64E-02	1.01E-01	1.07E-01	1.12E-01	1.18E-01	1.23E-01
6208.475	9.61E-02	1.01E-01	1.06E-01	1.11E-01	1.16E-01	1.20E-01
6208.425	9.56E-02	1.01E-01	1.07E-01	1.11E-01	1.14E-01	1.19E-01
6208.375	9.44E-02	9.96E-02	1.06E-01	1.10E-01	1.14E-01	1.20E-01
6208.325	9.26E-02	9.72E-02	1.03E-01	1.08E-01	1.13E-01	1.20E-01
6208.275	8.98E-02	9.52E-02	1.00E-01	1.05E-01	1.11E-01	1.19E-01
6208.225	8.86E-02	9.35E-02	9.82E-02	1.03E-01	1.09E-01	1.17E-01
6208.175	8.82E-02	9.23E-02	9.67E-02	1.02E-01	1.08E-01	1.14E-01
6208.125	8.78E-02	9.13E-02	9.54E-02	1.01E-01	1.06E-01	1.11E-01
6208.075	8.75E-02	9.10E-02	9.47E-02	9.98E-02	1.05E-01	1.08E-01
6208.025	8.74E-02	9.08E-02	9.40E-02	9.83E-02	1.03E-01	1.05E-01
6207.975	8.68E-02	8.96E-02	9.26E-02	9.65E-02	1.00E-01	1.02E-01
6207.925	8.53E-02	8.79E-02	9.12E-02	9.53E-02	9.80E-02	9.87E-02
6207.875	8.36E-02	8.70E-02	9.04E-02	9.40E-02	9.58E-02	9.61E-02
6207.825	8.26E-02	8.64E-02	9.02E-02	9.27E-02	9.36E-02	9.34E-02
6207.775	8.25E-02	8.65E-02	9.02E-02	9.18E-02	9.18E-02	9.15E-02
6207.725	8.28E-02	8.67E-02	8.98E-02	9.07E-02	9.03E-02	8.99E-02
6207.675	8.27E-02	8.61E-02	8.83E-02	8.84E-02	8.80E-02	8.76E-02
6207.625	8.25E-02	8.50E-02	8.61E-02	8.59E-02	8.55E-02	8.50E-02
6207.575	8.16E-02	8.35E-02	8.38E-02	8.28E-02	8.22E-02	8.22E-02
6207.525	8.04E-02	8.16E-02	8.13E-02	7.98E-02	7.85E-02	7.85E-02
6207.475	7.88E-02	7.93E-02	7.86E-02	7.66E-02	7.53E-02	7.55E-02
6207.425	7.67E-02	7.62E-02	7.53E-02	7.38E-02	7.29E-02	7.32E-02
6207.375	7.37E-02	7.32E-02	7.24E-02	7.15E-02	7.09E-02	7.11E-02

X (km): 615.675 615.725 615.775 615.825 615.875 615.925

Y (km)



APPENDIX B Dispersion Modelling

6212.375	9.53E-02	9.65E-02	9.61E-02	9.43E-02	9.19E-02	8.96E-02
6212.325	9.68E-02	9.85E-02	9.86E-02	9.71E-02	9.47E-02	9.23E-02
6212.275	9.81E-02	1.00E-01	1.01E-01	9.99E-02	9.76E-02	9.51E-02
6212.225	9.97E-02	1.02E-01	1.03E-01	1.03E-01	1.01E-01	9.81E-02
6212.175	1.01E-01	1.04E-01	1.05E-01	1.05E-01	1.03E-01	1.01E-01
6212.125	1.03E-01	1.06E-01	1.07E-01	1.07E-01	1.06E-01	1.03E-01
6212.075	1.05E-01	1.08E-01	1.10E-01	1.10E-01	1.09E-01	1.06E-01
6212.025	1.07E-01	1.10E-01	1.13E-01	1.13E-01	1.12E-01	1.10E-01
6211.975	1.09E-01	1.12E-01	1.15E-01	1.16E-01	1.17E-01	1.14E-01
6211.925	1.12E-01	1.14E-01	1.17E-01	1.20E-01	1.21E-01	1.19E-01
6211.875	1.14E-01	1.16E-01	1.19E-01	1.23E-01	1.24E-01	1.23E-01
6211.825	1.17E-01	1.19E-01	1.22E-01	1.26E-01	1.28E-01	1.27E-01
6211.775	1.21E-01	1.22E-01	1.25E-01	1.29E-01	1.31E-01	1.31E-01
6211.725	1.24E-01	1.25E-01	1.28E-01	1.31E-01	1.35E-01	1.35E-01
6211.675	1.28E-01	1.29E-01	1.31E-01	1.34E-01	1.38E-01	1.40E-01
6211.625	1.33E-01	1.33E-01	1.34E-01	1.38E-01	1.41E-01	1.44E-01
6211.575	1.37E-01	1.37E-01	1.38E-01	1.41E-01	1.45E-01	1.48E-01
6211.525	1.42E-01	1.42E-01	1.43E-01	1.45E-01	1.49E-01	1.53E-01
6211.475	1.47E-01	1.47E-01	1.47E-01	1.49E-01	1.53E-01	1.57E-01
6211.425	1.52E-01	1.52E-01	1.53E-01	1.54E-01	1.57E-01	1.62E-01
6211.375	1.57E-01	1.58E-01	1.58E-01	1.59E-01	1.62E-01	1.66E-01
6211.325	1.63E-01	1.64E-01	1.64E-01	1.65E-01	1.67E-01	1.71E-01
6211.275	1.68E-01	1.70E-01	1.70E-01	1.71E-01	1.73E-01	1.76E-01
6211.225	1.74E-01	1.76E-01	1.77E-01	1.77E-01	1.78E-01	1.82E-01
6211.175	1.80E-01	1.82E-01	1.83E-01	1.84E-01	1.85E-01	1.88E-01
6211.125	1.86E-01	1.89E-01	1.90E-01	1.91E-01	1.91E-01	1.94E-01
6211.075	1.92E-01	1.95E-01	1.98E-01	1.99E-01	1.98E-01	2.00E-01
6211.025	1.97E-01	2.02E-01	2.05E-01	2.07E-01	2.06E-01	2.06E-01
6210.975	2.01E-01	2.07E-01	2.12E-01	2.15E-01	2.14E-01	2.13E-01
6210.925	2.04E-01	2.13E-01	2.19E-01	2.23E-01	2.23E-01	2.20E-01
6210.875	2.06E-01	2.16E-01	2.25E-01	2.30E-01	2.31E-01	2.29E-01
6210.825	2.07E-01	2.20E-01	2.30E-01	2.37E-01	2.40E-01	2.40E-01
6210.775	2.10E-01	2.23E-01	2.35E-01	2.44E-01	2.50E-01	2.53E-01
6210.725	2.11E-01	2.26E-01	2.40E-01	2.52E-01	2.60E-01	2.66E-01
6210.675	2.11E-01	2.27E-01	2.44E-01	2.60E-01	2.72E-01	2.80E-01
6210.625	2.08E-01	2.27E-01	2.47E-01	2.67E-01	2.82E-01	2.95E-01
6210.575	2.06E-01	2.25E-01	2.48E-01	2.72E-01	2.94E-01	3.12E-01
6210.525	2.05E-01	2.22E-01	2.46E-01	2.72E-01	2.99E-01	3.25E-01
6210.475	2.06E-01	2.21E-01	2.43E-01	2.71E-01	3.02E-01	3.34E-01
6210.425	2.10E-01	2.23E-01	2.41E-01	2.67E-01	3.01E-01	3.39E-01
6210.375	2.17E-01	2.28E-01	2.43E-01	2.66E-01	2.98E-01	3.39E-01
6210.325	2.26E-01	2.36E-01	2.49E-01	2.68E-01	2.96E-01	3.36E-01
6210.275	2.35E-01	2.47E-01	2.59E-01	2.75E-01	2.97E-01	3.32E-01
6210.225	2.37E-01	2.52E-01	2.68E-01	2.85E-01	3.05E-01	3.33E-01
6210.175	2.40E-01	2.56E-01	2.75E-01	2.95E-01	3.18E-01	3.41E-01
6210.125	2.47E-01	2.65E-01	2.83E-01	3.04E-01	3.31E-01	3.59E-01
6210.075	2.41E-01	2.65E-01	2.92E-01	3.17E-01	3.44E-01	3.72E-01
6210.025	2.36E-01	2.58E-01	2.84E-01	3.18E-01	3.58E-01	3.92E-01
6209.975	2.43E-01	2.63E-01	2.85E-01	3.11E-01	3.48E-01	3.96E-01
6209.925	2.53E-01	2.74E-01	2.98E-01	3.25E-01	3.57E-01	3.96E-01
6209.875	2.62E-01	2.85E-01	3.09E-01	3.41E-01	3.78E-01	4.18E-01
6209.825	2.73E-01	2.95E-01	3.21E-01	3.52E-01	3.91E-01	4.40E-01
6209.775	2.73E-01	2.95E-01	3.23E-01	3.58E-01	3.96E-01	4.46E-01
6209.725	2.63E-01	2.85E-01	3.10E-01	3.41E-01	3.78E-01	4.24E-01
6209.675	2.51E-01	2.73E-01	2.96E-01	3.26E-01	3.63E-01	4.08E-01
6209.625	2.47E-01	2.68E-01	2.94E-01	3.25E-01	3.63E-01	4.12E-01
6209.575	2.48E-01	2.71E-01	2.99E-01	3.33E-01	3.74E-01	4.17E-01
6209.525	2.56E-01	2.81E-01	3.09E-01	3.37E-01	3.57E-01	3.82E-01
6209.475	2.61E-01	2.79E-01	2.97E-01	3.12E-01	3.30E-01	3.49E-01
6209.425	2.52E-01	2.63E-01	2.76E-01	2.90E-01	3.05E-01	3.20E-01
6209.375	2.35E-01	2.45E-01	2.57E-01	2.68E-01	2.82E-01	2.95E-01
6209.325	2.21E-01	2.29E-01	2.38E-01	2.50E-01	2.63E-01	2.70E-01
6209.275	2.06E-01	2.13E-01	2.22E-01	2.32E-01	2.40E-01	2.43E-01
6209.225	1.93E-01	2.00E-01	2.06E-01	2.13E-01	2.17E-01	2.22E-01
6209.175	1.81E-01	1.87E-01	1.92E-01	1.94E-01	2.00E-01	2.11E-01
6209.125	1.71E-01	1.74E-01	1.76E-01	1.81E-01	1.91E-01	2.05E-01
6209.075	1.61E-01	1.62E-01	1.65E-01	1.73E-01	1.86E-01	2.01E-01
6209.025	1.51E-01	1.53E-01	1.60E-01	1.70E-01	1.84E-01	1.99E-01
6208.975	1.44E-01	1.49E-01	1.57E-01	1.70E-01	1.84E-01	1.98E-01
6208.925	1.40E-01	1.46E-01	1.57E-01	1.69E-01	1.81E-01	1.96E-01
6208.875	1.37E-01	1.45E-01	1.56E-01	1.66E-01	1.78E-01	1.94E-01



APPENDIX B Dispersion Modelling

6208.825	1.35E-01	1.44E-01	1.53E-01	1.63E-01	1.76E-01	1.93E-01
6208.775	1.34E-01	1.42E-01	1.51E-01	1.62E-01	1.76E-01	1.92E-01
6208.725	1.33E-01	1.41E-01	1.50E-01	1.62E-01	1.77E-01	1.90E-01
6208.675	1.32E-01	1.41E-01	1.50E-01	1.63E-01	1.76E-01	1.86E-01
6208.625	1.32E-01	1.40E-01	1.47E-01	1.58E-01	1.70E-01	1.76E-01
6208.575	1.32E-01	1.40E-01	1.47E-01	1.55E-01	1.62E-01	1.65E-01
6208.525	1.29E-01	1.38E-01	1.46E-01	1.54E-01	1.55E-01	1.55E-01
6208.475	1.25E-01	1.34E-01	1.44E-01	1.50E-01	1.50E-01	1.48E-01
6208.425	1.25E-01	1.32E-01	1.39E-01	1.43E-01	1.43E-01	1.41E-01
6208.375	1.28E-01	1.34E-01	1.38E-01	1.38E-01	1.37E-01	1.36E-01
6208.325	1.28E-01	1.34E-01	1.37E-01	1.35E-01	1.32E-01	1.29E-01
6208.275	1.26E-01	1.31E-01	1.32E-01	1.30E-01	1.25E-01	1.22E-01
6208.225	1.23E-01	1.26E-01	1.25E-01	1.23E-01	1.19E-01	1.16E-01
6208.175	1.18E-01	1.19E-01	1.18E-01	1.17E-01	1.15E-01	1.14E-01
6208.125	1.14E-01	1.13E-01	1.12E-01	1.12E-01	1.11E-01	1.10E-01
6208.075	1.09E-01	1.09E-01	1.08E-01	1.08E-01	1.07E-01	1.06E-01
6208.025	1.05E-01	1.04E-01	1.04E-01	1.05E-01	1.04E-01	1.02E-01
6207.975	1.01E-01	1.01E-01	1.02E-01	1.02E-01	1.01E-01	9.90E-02
6207.925	9.88E-02	9.92E-02	9.96E-02	9.93E-02	9.80E-02	9.60E-02
6207.875	9.61E-02	9.66E-02	9.73E-02	9.68E-02	9.56E-02	9.32E-02
6207.825	9.35E-02	9.46E-02	9.46E-02	9.41E-02	9.27E-02	9.10E-02
6207.775	9.22E-02	9.26E-02	9.21E-02	9.10E-02	8.98E-02	8.87E-02
6207.725	9.04E-02	9.02E-02	8.87E-02	8.77E-02	8.66E-02	8.60E-02
6207.675	8.77E-02	8.71E-02	8.50E-02	8.44E-02	8.40E-02	8.39E-02
6207.625	8.50E-02	8.42E-02	8.36E-02	8.28E-02	8.24E-02	8.22E-02
6207.575	8.21E-02	8.22E-02	8.24E-02	8.24E-02	8.18E-02	8.20E-02
6207.525	7.93E-02	8.01E-02	8.05E-02	8.11E-02	8.13E-02	8.12E-02
6207.475	7.69E-02	7.86E-02	7.91E-02	7.96E-02	8.00E-02	8.01E-02
6207.425	7.47E-02	7.68E-02	7.75E-02	7.80E-02	7.83E-02	7.84E-02
6207.375	7.28E-02	7.46E-02	7.55E-02	7.61E-02	7.63E-02	7.67E-02

X (km): 615.975 616.025 616.075 616.125 616.175 616.225

Y (km)

6212.375	8.80E-02	8.71E-02	8.66E-02	8.68E-02	8.72E-02	8.76E-02
6212.325	9.05E-02	8.94E-02	8.89E-02	8.89E-02	8.94E-02	8.99E-02
6212.275	9.31E-02	9.19E-02	9.12E-02	9.12E-02	9.17E-02	9.22E-02
6212.225	9.57E-02	9.40E-02	9.32E-02	9.34E-02	9.41E-02	9.46E-02
6212.175	9.81E-02	9.59E-02	9.57E-02	9.62E-02	9.68E-02	9.72E-02
6212.125	1.00E-01	9.86E-02	9.85E-02	9.90E-02	9.95E-02	9.99E-02
6212.075	1.03E-01	1.01E-01	1.01E-01	1.02E-01	1.02E-01	1.03E-01
6212.025	1.07E-01	1.04E-01	1.04E-01	1.04E-01	1.05E-01	1.05E-01
6211.975	1.11E-01	1.07E-01	1.06E-01	1.06E-01	1.07E-01	1.08E-01
6211.925	1.15E-01	1.12E-01	1.09E-01	1.09E-01	1.09E-01	1.11E-01
6211.875	1.20E-01	1.16E-01	1.14E-01	1.13E-01	1.12E-01	1.13E-01
6211.825	1.24E-01	1.21E-01	1.19E-01	1.17E-01	1.16E-01	1.16E-01
6211.775	1.29E-01	1.26E-01	1.23E-01	1.22E-01	1.21E-01	1.20E-01
6211.725	1.34E-01	1.30E-01	1.28E-01	1.26E-01	1.25E-01	1.23E-01
6211.675	1.38E-01	1.35E-01	1.32E-01	1.31E-01	1.29E-01	1.28E-01
6211.625	1.43E-01	1.40E-01	1.37E-01	1.35E-01	1.34E-01	1.33E-01
6211.575	1.48E-01	1.45E-01	1.42E-01	1.40E-01	1.40E-01	1.39E-01
6211.525	1.53E-01	1.51E-01	1.47E-01	1.45E-01	1.45E-01	1.45E-01
6211.475	1.59E-01	1.57E-01	1.53E-01	1.51E-01	1.51E-01	1.51E-01
6211.425	1.64E-01	1.63E-01	1.59E-01	1.56E-01	1.56E-01	1.57E-01
6211.375	1.70E-01	1.69E-01	1.65E-01	1.61E-01	1.60E-01	1.62E-01
6211.325	1.75E-01	1.75E-01	1.71E-01	1.66E-01	1.64E-01	1.66E-01
6211.275	1.81E-01	1.82E-01	1.76E-01	1.71E-01	1.70E-01	1.72E-01
6211.225	1.87E-01	1.90E-01	1.86E-01	1.81E-01	1.78E-01	1.79E-01
6211.175	1.93E-01	1.97E-01	1.97E-01	1.92E-01	1.88E-01	1.88E-01
6211.125	1.99E-01	2.05E-01	2.06E-01	2.03E-01	1.98E-01	1.98E-01
6211.075	2.05E-01	2.11E-01	2.15E-01	2.12E-01	2.08E-01	2.08E-01
6211.025	2.10E-01	2.18E-01	2.23E-01	2.22E-01	2.17E-01	2.17E-01
6210.975	2.16E-01	2.23E-01	2.30E-01	2.31E-01	2.26E-01	2.24E-01
6210.925	2.20E-01	2.27E-01	2.36E-01	2.39E-01	2.34E-01	2.31E-01
6210.875	2.28E-01	2.33E-01	2.43E-01	2.49E-01	2.46E-01	2.41E-01
6210.825	2.40E-01	2.42E-01	2.51E-01	2.59E-01	2.58E-01	2.51E-01
6210.775	2.52E-01	2.53E-01	2.60E-01	2.71E-01	2.71E-01	2.64E-01
6210.725	2.68E-01	2.67E-01	2.71E-01	2.83E-01	2.87E-01	2.80E-01
6210.675	2.84E-01	2.84E-01	2.86E-01	2.95E-01	3.04E-01	2.99E-01
6210.625	3.03E-01	3.06E-01	3.06E-01	3.12E-01	3.23E-01	3.02E-01



APPENDIX B Dispersion Modelling

6210.575	3.25E-01	3.33E-01	3.34E-01	3.35E-01	3.46E-01	3.23E-01
6210.525	3.47E-01	3.61E-01	3.63E-01	3.62E-01	3.70E-01	3.51E-01
6210.475	3.63E-01	3.86E-01	3.97E-01	3.96E-01	3.95E-01	3.78E-01
6210.425	3.76E-01	4.10E-01	4.31E-01	4.31E-01	4.16E-01	4.10E-01
6210.375	3.86E-01	4.31E-01	4.64E-01	4.70E-01	4.52E-01	4.46E-01
6210.325	3.88E-01	4.44E-01	4.89E-01	5.05E-01	4.97E-01	4.95E-01
6210.275	3.83E-01	4.45E-01	5.06E-01	5.46E-01	5.62E-01	5.52E-01
6210.225	3.76E-01	4.41E-01	5.22E-01	5.94E-01	6.37E-01	6.31E-01
6210.175	3.74E-01	4.26E-01	5.21E-01	6.24E-01	7.04E-01	7.35E-01
6210.125	3.82E-01	4.26E-01	5.04E-01	6.27E-01	7.72E-01	8.57E-01
6210.075	4.05E-01	4.43E-01	4.95E-01	6.10E-01	8.01E-01	9.92E-01
6210.025	4.29E-01	4.75E-01	5.32E-01	6.05E-01	7.88E-01	1.05E+00
6209.975	4.54E-01	5.14E-01	5.75E-01	6.57E-01	7.88E-01	1.06E+00
6209.925	4.44E-01	5.19E-01	6.14E-01	7.28E-01	8.60E-01	1.07E+00
6209.875	4.72E-01	5.37E-01	6.09E-01	7.35E-01	9.49E-01	1.23E+00
6209.825	4.99E-01	5.66E-01	6.57E-01	7.83E-01	9.82E-01	1.28E+00
6209.775	5.07E-01	5.86E-01	6.85E-01	8.28E-01	1.05E+00	1.40E+00
6209.725	4.78E-01	5.43E-01	6.31E-01	7.59E-01	9.87E-01	1.41E+00
6209.675	4.65E-01	5.33E-01	6.26E-01	7.68E-01	1.01E+00	1.26E+00
6209.625	4.73E-01	5.34E-01	6.10E-01	7.07E-01	8.08E-01	9.46E-01
6209.575	4.49E-01	4.95E-01	5.34E-01	5.85E-01	6.47E-01	7.43E-01
6209.525	4.07E-01	4.32E-01	4.60E-01	5.00E-01	5.34E-01	6.35E-01
6209.475	3.68E-01	3.88E-01	4.09E-01	4.23E-01	4.81E-01	6.05E-01
6209.425	3.34E-01	3.50E-01	3.56E-01	3.91E-01	4.64E-01	5.95E-01
6209.375	3.05E-01	3.10E-01	3.27E-01	3.75E-01	4.56E-01	5.58E-01
6209.325	2.73E-01	2.83E-01	3.17E-01	3.66E-01	4.50E-01	5.06E-01
6209.275	2.50E-01	2.71E-01	3.05E-01	3.55E-01	4.28E-01	4.55E-01
6209.225	2.38E-01	2.61E-01	2.95E-01	3.48E-01	3.95E-01	4.09E-01
6209.175	2.29E-01	2.54E-01	2.89E-01	3.35E-01	3.57E-01	3.71E-01
6209.125	2.23E-01	2.49E-01	2.85E-01	3.14E-01	3.25E-01	3.39E-01
6209.075	2.20E-01	2.47E-01	2.79E-01	2.92E-01	3.02E-01	3.14E-01
6209.025	2.19E-01	2.46E-01	2.69E-01	2.76E-01	2.85E-01	2.92E-01
6208.975	2.19E-01	2.43E-01	2.55E-01	2.60E-01	2.67E-01	2.73E-01
6208.925	2.17E-01	2.35E-01	2.41E-01	2.45E-01	2.50E-01	2.56E-01
6208.875	2.13E-01	2.25E-01	2.28E-01	2.31E-01	2.35E-01	2.41E-01
6208.825	2.08E-01	2.15E-01	2.18E-01	2.18E-01	2.19E-01	2.23E-01
6208.775	2.03E-01	2.07E-01	2.09E-01	2.10E-01	2.10E-01	2.07E-01
6208.725	1.97E-01	1.99E-01	2.01E-01	1.99E-01	1.98E-01	1.97E-01
6208.675	1.89E-01	1.89E-01	1.88E-01	1.86E-01	1.86E-01	1.86E-01
6208.625	1.78E-01	1.78E-01	1.75E-01	1.74E-01	1.71E-01	1.69E-01
6208.575	1.68E-01	1.69E-01	1.66E-01	1.62E-01	1.60E-01	1.61E-01
6208.525	1.60E-01	1.61E-01	1.58E-01	1.53E-01	1.52E-01	1.57E-01
6208.475	1.51E-01	1.53E-01	1.52E-01	1.47E-01	1.45E-01	1.47E-01
6208.425	1.42E-01	1.42E-01	1.42E-01	1.39E-01	1.37E-01	1.40E-01
6208.375	1.35E-01	1.34E-01	1.31E-01	1.31E-01	1.31E-01	1.35E-01
6208.325	1.28E-01	1.27E-01	1.23E-01	1.25E-01	1.27E-01	1.30E-01
6208.275	1.22E-01	1.19E-01	1.18E-01	1.20E-01	1.23E-01	1.25E-01
6208.225	1.15E-01	1.14E-01	1.14E-01	1.17E-01	1.19E-01	1.20E-01
6208.175	1.11E-01	1.10E-01	1.10E-01	1.13E-01	1.14E-01	1.15E-01
6208.125	1.07E-01	1.06E-01	1.07E-01	1.09E-01	1.10E-01	1.10E-01
6208.075	1.04E-01	1.03E-01	1.03E-01	1.06E-01	1.07E-01	1.06E-01
6208.025	1.01E-01	9.94E-02	9.94E-02	1.01E-01	1.04E-01	1.05E-01
6207.975	9.77E-02	9.64E-02	9.64E-02	9.86E-02	1.01E-01	1.02E-01
6207.925	9.46E-02	9.37E-02	9.48E-02	9.67E-02	9.91E-02	9.98E-02
6207.875	9.21E-02	9.23E-02	9.43E-02	9.70E-02	9.85E-02	9.79E-02
6207.825	9.02E-02	9.12E-02	9.41E-02	9.68E-02	9.68E-02	9.59E-02
6207.775	8.87E-02	9.01E-02	9.27E-02	9.54E-02	9.62E-02	9.52E-02
6207.725	8.64E-02	8.81E-02	9.05E-02	9.30E-02	9.44E-02	9.32E-02
6207.675	8.40E-02	8.60E-02	8.84E-02	9.10E-02	9.18E-02	9.16E-02
6207.625	8.18E-02	8.35E-02	8.66E-02	8.90E-02	8.94E-02	8.88E-02
6207.575	8.22E-02	8.23E-02	8.49E-02	8.66E-02	8.69E-02	8.67E-02
6207.525	8.22E-02	8.23E-02	8.35E-02	8.44E-02	8.48E-02	8.43E-02
6207.475	8.10E-02	8.11E-02	8.20E-02	8.25E-02	8.25E-02	8.27E-02
6207.425	7.85E-02	7.90E-02	7.97E-02	8.03E-02	8.10E-02	8.09E-02
6207.375	7.59E-02	7.68E-02	7.76E-02	7.84E-02	7.91E-02	7.95E-02

X (km): 616.275 616.325 616.375 616.425 616.475 616.525

Y (km)

6212.375 8.78E-02 8.79E-02 8.76E-02 8.69E-02 8.58E-02 8.44E-02



APPENDIX B Dispersion Modelling

6212.325 9.02E-02 9.02E-02 8.98E-02 8.91E-02 8.81E-02 8.70E-02
6212.275 9.25E-02 9.24E-02 9.20E-02 9.13E-02 9.04E-02 8.93E-02
6212.225 9.49E-02 9.47E-02 9.43E-02 9.35E-02 9.25E-02 9.15E-02
6212.175 9.74E-02 9.72E-02 9.66E-02 9.58E-02 9.48E-02 9.37E-02
6212.125 1.00E-01 9.98E-02 9.91E-02 9.82E-02 9.72E-02 9.60E-02
6212.075 1.03E-01 1.03E-01 1.02E-01 1.01E-01 9.96E-02 9.84E-02
6212.025 1.06E-01 1.05E-01 1.05E-01 1.03E-01 1.02E-01 1.01E-01
6211.975 1.09E-01 1.08E-01 1.07E-01 1.06E-01 1.05E-01 1.03E-01
6211.925 1.11E-01 1.11E-01 1.10E-01 1.09E-01 1.07E-01 1.06E-01
6211.875 1.14E-01 1.14E-01 1.14E-01 1.12E-01 1.09E-01 1.08E-01
6211.825 1.17E-01 1.18E-01 1.17E-01 1.14E-01 1.11E-01 1.09E-01
6211.775 1.20E-01 1.21E-01 1.20E-01 1.18E-01 1.15E-01 1.12E-01
6211.725 1.23E-01 1.24E-01 1.23E-01 1.21E-01 1.19E-01 1.16E-01
6211.675 1.27E-01 1.28E-01 1.27E-01 1.25E-01 1.22E-01 1.20E-01
6211.625 1.31E-01 1.31E-01 1.30E-01 1.28E-01 1.26E-01 1.24E-01
6211.575 1.37E-01 1.34E-01 1.33E-01 1.32E-01 1.30E-01 1.28E-01
6211.525 1.44E-01 1.41E-01 1.37E-01 1.35E-01 1.33E-01 1.31E-01
6211.475 1.50E-01 1.48E-01 1.42E-01 1.39E-01 1.37E-01 1.35E-01
6211.425 1.57E-01 1.54E-01 1.48E-01 1.42E-01 1.40E-01 1.39E-01
6211.375 1.63E-01 1.61E-01 1.55E-01 1.48E-01 1.44E-01 1.42E-01
6211.325 1.69E-01 1.68E-01 1.62E-01 1.55E-01 1.49E-01 1.47E-01
6211.275 1.74E-01 1.74E-01 1.69E-01 1.61E-01 1.56E-01 1.52E-01
6211.225 1.78E-01 1.78E-01 1.75E-01 1.69E-01 1.64E-01 1.59E-01
6211.175 1.89E-01 1.90E-01 1.87E-01 1.80E-01 1.74E-01 1.69E-01
6211.125 2.01E-01 2.02E-01 1.98E-01 1.92E-01 1.85E-01 1.79E-01
6211.075 2.10E-01 2.12E-01 2.08E-01 2.03E-01 1.95E-01 1.89E-01
6211.025 2.19E-01 2.20E-01 2.17E-01 2.12E-01 2.06E-01 1.99E-01
6210.975 2.24E-01 2.27E-01 2.25E-01 2.21E-01 2.16E-01 2.10E-01
6210.925 2.32E-01 2.35E-01 2.35E-01 2.31E-01 2.26E-01 2.22E-01
6210.875 2.41E-01 2.44E-01 2.45E-01 2.43E-01 2.38E-01 2.34E-01
6210.825 2.53E-01 2.55E-01 2.57E-01 2.56E-01 2.52E-01 2.49E-01
6210.775 2.62E-01 2.65E-01 2.68E-01 2.70E-01 2.67E-01 2.64E-01
6210.725 2.75E-01 2.72E-01 2.80E-01 2.85E-01 2.83E-01 2.82E-01
6210.675 2.81E-01 2.83E-01 2.89E-01 2.98E-01 3.02E-01 3.02E-01
6210.625 2.99E-01 3.01E-01 3.05E-01 3.11E-01 3.20E-01 3.19E-01
6210.575 3.20E-01 3.19E-01 3.22E-01 3.29E-01 3.39E-01 3.29E-01
6210.525 3.44E-01 3.43E-01 3.47E-01 3.47E-01 3.46E-01 3.45E-01
6210.475 3.72E-01 3.73E-01 3.73E-01 3.70E-01 3.68E-01 3.68E-01
6210.425 4.06E-01 4.06E-01 4.07E-01 4.03E-01 4.01E-01 4.04E-01
6210.375 4.46E-01 4.46E-01 4.50E-01 4.42E-01 4.43E-01 4.47E-01
6210.325 4.99E-01 4.98E-01 5.03E-01 4.93E-01 4.94E-01 4.98E-01
6210.275 5.61E-01 5.60E-01 5.68E-01 5.58E-01 5.57E-01 5.65E-01
6210.225 6.37E-01 6.40E-01 6.49E-01 6.42E-01 6.39E-01 6.50E-01
6210.175 7.33E-01 7.41E-01 7.51E-01 7.53E-01 7.44E-01 7.47E-01
6210.125 8.59E-01 8.68E-01 8.82E-01 8.92E-01 8.88E-01 8.74E-01
6210.075 1.05E+00 1.06E+00 1.06E+00 1.07E+00 1.07E+00 1.02E+00
6210.025 1.28E+00 1.32E+00 1.31E+00 1.32E+00 1.34E+00 1.21E+00
6209.975 1.49E+00 1.72E+00 1.71E+00 1.73E+00 1.79E+00 1.45E+00
6209.925 1.56E+00 2.29E+00 2.45E+00 2.74E+00 2.70E+00 2.21E+00
6209.875 1.60E+00 2.73E+00 4.11E+00 4.37E+00 3.49E+00 3.10E+00
6209.825 1.87E+00 2.94E+00 7.20E+00 8.24E+00 6.52E+00 5.02E+00
6209.775 2.10E+00 3.59E+00 1.13E+01 2.72E+01 1.18E+01 6.41E+00
6209.725 2.04E+00 2.74E+00 4.29E+00 6.03E+00 5.01E+00 4.14E+00
6209.675 1.54E+00 1.88E+00 2.84E+00 3.70E+00 2.86E+00 2.96E+00
6209.625 1.16E+00 1.74E+00 1.98E+00 2.30E+00 1.81E+00 1.84E+00
6209.575 1.00E+00 1.38E+00 1.43E+00 1.57E+00 1.52E+00 1.18E+00
6209.525 8.91E-01 1.02E+00 1.08E+00 1.16E+00 1.21E+00 8.48E-01
6209.475 7.80E-01 8.16E-01 8.68E-01 8.62E-01 8.96E-01 6.84E-01
6209.425 6.78E-01 6.93E-01 7.28E-01 6.76E-01 6.55E-01 5.69E-01
6209.375 5.77E-01 6.06E-01 6.23E-01 5.94E-01 5.79E-01 5.17E-01
6209.325 5.17E-01 5.39E-01 5.23E-01 4.61E-01 4.77E-01 4.69E-01
6209.275 4.68E-01 4.89E-01 4.60E-01 4.06E-01 4.23E-01 4.32E-01
6209.225 4.22E-01 4.54E-01 4.36E-01 4.11E-01 4.01E-01 4.24E-01
6209.175 3.83E-01 4.13E-01 4.11E-01 4.00E-01 3.81E-01 3.80E-01
6209.125 3.52E-01 3.66E-01 3.70E-01 3.63E-01 3.36E-01 3.28E-01
6209.075 3.26E-01 3.34E-01 3.28E-01 3.25E-01 3.09E-01 3.04E-01
6209.025 2.99E-01 3.01E-01 2.72E-01 2.65E-01 2.65E-01 2.86E-01
6208.975 2.77E-01 2.63E-01 2.39E-01 2.32E-01 2.43E-01 2.62E-01
6208.925 2.62E-01 2.51E-01 2.26E-01 2.20E-01 2.29E-01 2.48E-01
6208.875 2.51E-01 2.41E-01 2.26E-01 2.15E-01 2.16E-01 2.34E-01
6208.825 2.28E-01 2.12E-01 2.01E-01 1.96E-01 2.08E-01 2.19E-01



APPENDIX B Dispersion Modelling

6208.775	1.99E-01	1.96E-01	1.91E-01	1.92E-01	1.99E-01	2.10E-01
6208.725	1.88E-01	1.84E-01	1.83E-01	1.82E-01	1.88E-01	1.97E-01
6208.675	1.81E-01	1.75E-01	1.72E-01	1.72E-01	1.80E-01	1.85E-01
6208.625	1.70E-01	1.72E-01	1.64E-01	1.65E-01	1.66E-01	1.77E-01
6208.575	1.66E-01	1.63E-01	1.56E-01	1.59E-01	1.59E-01	1.69E-01
6208.525	1.55E-01	1.50E-01	1.49E-01	1.48E-01	1.52E-01	1.57E-01
6208.475	1.50E-01	1.43E-01	1.45E-01	1.42E-01	1.49E-01	1.53E-01
6208.425	1.39E-01	1.41E-01	1.35E-01	1.36E-01	1.39E-01	1.44E-01
6208.375	1.38E-01	1.32E-01	1.31E-01	1.34E-01	1.36E-01	1.37E-01
6208.325	1.32E-01	1.30E-01	1.24E-01	1.26E-01	1.29E-01	1.33E-01
6208.275	1.27E-01	1.24E-01	1.20E-01	1.23E-01	1.23E-01	1.30E-01
6208.225	1.19E-01	1.19E-01	1.15E-01	1.16E-01	1.23E-01	1.25E-01
6208.175	1.14E-01	1.14E-01	1.12E-01	1.14E-01	1.20E-01	1.22E-01
6208.125	1.09E-01	1.09E-01	1.09E-01	1.11E-01	1.15E-01	1.19E-01
6208.075	1.06E-01	1.06E-01	1.06E-01	1.09E-01	1.13E-01	1.16E-01
6208.025	1.05E-01	1.03E-01	1.04E-01	1.06E-01	1.10E-01	1.12E-01
6207.975	1.01E-01	1.01E-01	1.02E-01	1.04E-01	1.07E-01	1.09E-01
6207.925	9.82E-02	9.85E-02	9.94E-02	1.01E-01	1.04E-01	1.07E-01
6207.875	9.62E-02	9.64E-02	9.69E-02	9.84E-02	1.01E-01	1.04E-01
6207.825	9.42E-02	9.41E-02	9.43E-02	9.61E-02	9.91E-02	1.02E-01
6207.775	9.39E-02	9.17E-02	9.20E-02	9.41E-02	9.68E-02	9.89E-02
6207.725	9.21E-02	9.11E-02	9.01E-02	9.22E-02	9.45E-02	9.61E-02
6207.675	8.97E-02	8.90E-02	8.84E-02	9.02E-02	9.22E-02	9.32E-02
6207.625	8.76E-02	8.73E-02	8.67E-02	8.82E-02	8.97E-02	9.01E-02
6207.575	8.58E-02	8.57E-02	8.49E-02	8.61E-02	8.71E-02	8.69E-02
6207.525	8.42E-02	8.40E-02	8.31E-02	8.39E-02	8.44E-02	8.37E-02
6207.475	8.27E-02	8.09E-02	8.12E-02	8.16E-02	8.16E-02	8.07E-02
6207.425	8.08E-02	7.93E-02	7.93E-02	7.92E-02	7.87E-02	7.78E-02
6207.375	7.92E-02	7.75E-02	7.72E-02	7.67E-02	7.60E-02	7.52E-02

X (km): 616.575 616.625 616.675 616.725 616.775 616.825

Y (km)

6212.375	8.31E-02	8.20E-02	8.10E-02	8.03E-02	7.98E-02	7.96E-02
6212.325	8.57E-02	8.44E-02	8.33E-02	8.26E-02	8.19E-02	8.14E-02
6212.275	8.80E-02	8.67E-02	8.57E-02	8.47E-02	8.39E-02	8.34E-02
6212.225	9.02E-02	8.91E-02	8.79E-02	8.68E-02	8.59E-02	8.52E-02
6212.175	9.25E-02	9.14E-02	9.02E-02	8.90E-02	8.78E-02	8.72E-02
6212.125	9.49E-02	9.38E-02	9.25E-02	9.11E-02	9.00E-02	8.94E-02
6212.075	9.73E-02	9.62E-02	9.48E-02	9.33E-02	9.24E-02	9.16E-02
6212.025	9.98E-02	9.87E-02	9.71E-02	9.58E-02	9.47E-02	9.37E-02
6211.975	1.02E-01	1.01E-01	9.96E-02	9.82E-02	9.66E-02	9.57E-02
6211.925	1.05E-01	1.04E-01	1.02E-01	1.00E-01	9.89E-02	9.81E-02
6211.875	1.07E-01	1.06E-01	1.05E-01	1.03E-01	1.01E-01	1.01E-01
6211.825	1.09E-01	1.09E-01	1.07E-01	1.05E-01	1.04E-01	1.04E-01
6211.775	1.10E-01	1.10E-01	1.09E-01	1.08E-01	1.07E-01	1.06E-01
6211.725	1.13E-01	1.12E-01	1.11E-01	1.10E-01	1.09E-01	1.09E-01
6211.675	1.18E-01	1.15E-01	1.14E-01	1.13E-01	1.12E-01	1.11E-01
6211.625	1.22E-01	1.20E-01	1.19E-01	1.17E-01	1.16E-01	1.14E-01
6211.575	1.26E-01	1.25E-01	1.24E-01	1.23E-01	1.21E-01	1.19E-01
6211.525	1.30E-01	1.29E-01	1.28E-01	1.27E-01	1.26E-01	1.25E-01
6211.475	1.34E-01	1.33E-01	1.32E-01	1.31E-01	1.30E-01	1.29E-01
6211.425	1.38E-01	1.36E-01	1.36E-01	1.35E-01	1.34E-01	1.34E-01
6211.375	1.41E-01	1.40E-01	1.39E-01	1.39E-01	1.39E-01	1.39E-01
6211.325	1.45E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01
6211.275	1.49E-01	1.44E-01	1.44E-01	1.45E-01	1.47E-01	1.46E-01
6211.225	1.56E-01	1.50E-01	1.48E-01	1.49E-01	1.51E-01	1.51E-01
6211.175	1.66E-01	1.63E-01	1.60E-01	1.56E-01	1.57E-01	1.58E-01
6211.125	1.75E-01	1.71E-01	1.68E-01	1.64E-01	1.64E-01	1.66E-01
6211.075	1.84E-01	1.80E-01	1.77E-01	1.72E-01	1.72E-01	1.74E-01
6211.025	1.94E-01	1.89E-01	1.86E-01	1.85E-01	1.85E-01	1.87E-01
6210.975	2.04E-01	2.00E-01	1.97E-01	1.97E-01	1.97E-01	1.97E-01
6210.925	2.16E-01	2.12E-01	2.09E-01	2.09E-01	2.09E-01	2.06E-01
6210.875	2.30E-01	2.25E-01	2.22E-01	2.20E-01	2.18E-01	2.14E-01
6210.825	2.44E-01	2.40E-01	2.36E-01	2.28E-01	2.25E-01	2.17E-01
6210.775	2.60E-01	2.55E-01	2.49E-01	2.41E-01	2.35E-01	2.24E-01
6210.725	2.77E-01	2.72E-01	2.61E-01	2.55E-01	2.46E-01	2.32E-01
6210.675	2.96E-01	2.83E-01	2.76E-01	2.71E-01	2.57E-01	2.41E-01
6210.625	3.07E-01	2.95E-01	2.96E-01	2.87E-01	2.69E-01	2.50E-01
6210.575	3.19E-01	3.19E-01	3.20E-01	3.03E-01	2.83E-01	2.61E-01



APPENDIX B Dispersion Modelling

6210.525 3.41E-01 3.46E-01 3.44E-01 3.23E-01 2.96E-01 2.72E-01
6210.475 3.73E-01 3.78E-01 3.69E-01 3.43E-01 3.13E-01 2.82E-01
6210.425 4.10E-01 4.15E-01 3.94E-01 3.62E-01 3.28E-01 2.96E-01
6210.375 4.53E-01 4.52E-01 4.21E-01 3.80E-01 3.42E-01 3.15E-01
6210.325 5.08E-01 4.90E-01 4.46E-01 3.99E-01 3.62E-01 3.44E-01
6210.275 5.77E-01 5.31E-01 4.71E-01 4.19E-01 3.95E-01 3.92E-01
6210.225 6.46E-01 5.69E-01 4.96E-01 4.52E-01 4.47E-01 4.51E-01
6210.175 7.02E-01 5.98E-01 5.36E-01 5.18E-01 5.28E-01 5.18E-01
6210.125 7.74E-01 6.56E-01 6.15E-01 6.26E-01 6.28E-01 5.70E-01
6210.075 8.50E-01 7.45E-01 7.50E-01 7.37E-01 6.80E-01 6.27E-01
6210.025 9.77E-01 9.31E-01 9.02E-01 8.19E-01 7.80E-01 7.21E-01
6209.975 1.29E+00 1.19E+00 1.05E+00 9.13E-01 8.94E-01 8.36E-01
6209.925 2.15E+00 1.57E+00 1.24E+00 1.15E+00 1.09E+00 9.49E-01
6209.875 3.16E+00 2.50E+00 1.74E+00 1.47E+00 1.26E+00 1.04E+00
6209.825 4.38E+00 3.78E+00 2.29E+00 1.67E+00 1.31E+00 1.14E+00
6209.775 4.49E+00 3.82E+00 2.22E+00 1.55E+00 1.29E+00 1.15E+00
6209.725 3.76E+00 3.31E+00 1.96E+00 1.55E+00 1.24E+00 1.06E+00
6209.675 2.67E+00 2.16E+00 1.58E+00 1.39E+00 1.15E+00 1.01E+00
6209.625 1.82E+00 1.41E+00 1.16E+00 1.03E+00 9.23E-01 8.95E-01
6209.575 1.20E+00 1.05E+00 9.05E-01 7.91E-01 7.74E-01 7.53E-01
6209.525 7.17E-01 7.76E-01 7.88E-01 7.33E-01 6.70E-01 6.83E-01
6209.475 5.57E-01 5.96E-01 6.56E-01 6.74E-01 6.38E-01 6.00E-01
6209.425 4.88E-01 4.83E-01 5.52E-01 5.92E-01 6.02E-01 5.74E-01
6209.375 4.64E-01 4.31E-01 4.48E-01 5.09E-01 5.41E-01 5.42E-01
6209.325 4.34E-01 3.97E-01 3.94E-01 4.38E-01 4.86E-01 5.11E-01
6209.275 4.03E-01 3.74E-01 3.60E-01 3.88E-01 4.28E-01 4.62E-01
6209.225 3.83E-01 3.51E-01 3.36E-01 3.40E-01 3.77E-01 4.17E-01
6209.175 3.56E-01 3.32E-01 3.23E-01 3.27E-01 3.34E-01 3.66E-01
6209.125 3.33E-01 3.23E-01 3.09E-01 3.08E-01 3.15E-01 3.41E-01
6209.075 3.20E-01 3.12E-01 3.03E-01 3.01E-01 3.06E-01 3.14E-01
6209.025 2.96E-01 2.97E-01 2.83E-01 2.89E-01 2.90E-01 2.97E-01
6208.975 2.81E-01 2.79E-01 2.76E-01 2.78E-01 2.75E-01 2.79E-01
6208.925 2.61E-01 2.65E-01 2.67E-01 2.61E-01 2.63E-01 2.69E-01
6208.875 2.48E-01 2.50E-01 2.55E-01 2.51E-01 2.52E-01 2.54E-01
6208.825 2.32E-01 2.42E-01 2.41E-01 2.38E-01 2.38E-01 2.42E-01
6208.775 2.19E-01 2.26E-01 2.30E-01 2.26E-01 2.27E-01 2.29E-01
6208.725 2.08E-01 2.12E-01 2.16E-01 2.16E-01 2.16E-01 2.16E-01
6208.675 1.95E-01 2.03E-01 2.06E-01 2.06E-01 2.04E-01 2.07E-01
6208.625 1.83E-01 1.93E-01 1.95E-01 1.95E-01 1.96E-01 2.00E-01
6208.575 1.76E-01 1.82E-01 1.84E-01 1.87E-01 1.90E-01 1.95E-01
6208.525 1.65E-01 1.70E-01 1.76E-01 1.81E-01 1.85E-01 1.89E-01
6208.475 1.56E-01 1.62E-01 1.69E-01 1.76E-01 1.80E-01 1.83E-01
6208.425 1.46E-01 1.56E-01 1.63E-01 1.71E-01 1.74E-01 1.77E-01
6208.375 1.43E-01 1.50E-01 1.59E-01 1.65E-01 1.69E-01 1.71E-01
6208.325 1.39E-01 1.46E-01 1.53E-01 1.59E-01 1.64E-01 1.65E-01
6208.275 1.35E-01 1.42E-01 1.48E-01 1.54E-01 1.58E-01 1.59E-01
6208.225 1.31E-01 1.37E-01 1.43E-01 1.49E-01 1.52E-01 1.52E-01
6208.175 1.27E-01 1.32E-01 1.38E-01 1.44E-01 1.46E-01 1.45E-01
6208.125 1.23E-01 1.28E-01 1.34E-01 1.38E-01 1.40E-01 1.38E-01
6208.075 1.19E-01 1.24E-01 1.29E-01 1.33E-01 1.33E-01 1.31E-01
6208.025 1.16E-01 1.20E-01 1.24E-01 1.27E-01 1.27E-01 1.25E-01
6207.975 1.13E-01 1.17E-01 1.20E-01 1.21E-01 1.21E-01 1.20E-01
6207.925 1.10E-01 1.13E-01 1.15E-01 1.15E-01 1.15E-01 1.15E-01
6207.875 1.07E-01 1.09E-01 1.10E-01 1.10E-01 1.10E-01 1.11E-01
6207.825 1.03E-01 1.04E-01 1.05E-01 1.05E-01 1.06E-01 1.06E-01
6207.775 9.99E-02 1.00E-01 1.00E-01 1.01E-01 1.02E-01 1.02E-01
6207.725 9.64E-02 9.60E-02 9.61E-02 9.68E-02 9.78E-02 9.82E-02
6207.675 9.27E-02 9.20E-02 9.22E-02 9.31E-02 9.41E-02 9.44E-02
6207.625 8.92E-02 8.83E-02 8.87E-02 8.98E-02 9.07E-02 9.07E-02
6207.575 8.57E-02 8.50E-02 8.55E-02 8.66E-02 8.74E-02 8.72E-02
6207.525 8.25E-02 8.19E-02 8.25E-02 8.36E-02 8.42E-02 8.39E-02
6207.475 7.96E-02 7.91E-02 7.98E-02 8.08E-02 8.11E-02 8.08E-02
6207.425 7.69E-02 7.66E-02 7.72E-02 7.80E-02 7.82E-02 7.79E-02
6207.375 7.44E-02 7.42E-02 7.48E-02 7.54E-02 7.54E-02 7.52E-02

X (km): 616.875 616.925 616.975 617.025 617.075 617.125

Y (km)

6212.375 7.90E-02 7.82E-02 7.74E-02 7.65E-02 7.60E-02 7.63E-02
6212.325 8.09E-02 7.99E-02 7.90E-02 7.82E-02 7.83E-02 7.86E-02



APPENDIX B Dispersion Modelling

6212.275	8.27E-02	8.17E-02	8.06E-02	8.03E-02	8.07E-02	8.09E-02
6212.225	8.46E-02	8.34E-02	8.28E-02	8.28E-02	8.32E-02	8.32E-02
6212.175	8.67E-02	8.55E-02	8.50E-02	8.51E-02	8.57E-02	8.55E-02
6212.125	8.86E-02	8.79E-02	8.76E-02	8.78E-02	8.80E-02	8.80E-02
6212.075	9.08E-02	9.02E-02	9.03E-02	9.06E-02	9.06E-02	9.01E-02
6212.025	9.30E-02	9.27E-02	9.29E-02	9.31E-02	9.30E-02	9.22E-02
6211.975	9.55E-02	9.55E-02	9.55E-02	9.58E-02	9.55E-02	9.44E-02
6211.925	9.82E-02	9.83E-02	9.83E-02	9.84E-02	9.77E-02	9.65E-02
6211.875	1.01E-01	1.01E-01	1.01E-01	1.01E-01	1.00E-01	9.91E-02
6211.825	1.04E-01	1.04E-01	1.04E-01	1.04E-01	1.03E-01	1.02E-01
6211.775	1.06E-01	1.06E-01	1.07E-01	1.07E-01	1.06E-01	1.04E-01
6211.725	1.09E-01	1.09E-01	1.09E-01	1.09E-01	1.09E-01	1.07E-01
6211.675	1.11E-01	1.12E-01	1.12E-01	1.13E-01	1.11E-01	1.09E-01
6211.625	1.14E-01	1.15E-01	1.15E-01	1.15E-01	1.14E-01	1.11E-01
6211.575	1.18E-01	1.18E-01	1.19E-01	1.18E-01	1.17E-01	1.13E-01
6211.525	1.23E-01	1.22E-01	1.22E-01	1.21E-01	1.19E-01	1.16E-01
6211.475	1.28E-01	1.28E-01	1.26E-01	1.22E-01	1.20E-01	1.18E-01
6211.425	1.33E-01	1.32E-01	1.29E-01	1.26E-01	1.22E-01	1.19E-01
6211.375	1.38E-01	1.36E-01	1.32E-01	1.29E-01	1.25E-01	1.21E-01
6211.325	1.42E-01	1.39E-01	1.37E-01	1.33E-01	1.28E-01	1.24E-01
6211.275	1.45E-01	1.44E-01	1.41E-01	1.36E-01	1.31E-01	1.27E-01
6211.225	1.51E-01	1.49E-01	1.45E-01	1.40E-01	1.35E-01	1.30E-01
6211.175	1.58E-01	1.55E-01	1.50E-01	1.44E-01	1.39E-01	1.33E-01
6211.125	1.65E-01	1.61E-01	1.55E-01	1.49E-01	1.42E-01	1.37E-01
6211.075	1.73E-01	1.68E-01	1.61E-01	1.54E-01	1.46E-01	1.40E-01
6211.025	1.84E-01	1.76E-01	1.66E-01	1.58E-01	1.50E-01	1.43E-01
6210.975	1.92E-01	1.82E-01	1.71E-01	1.62E-01	1.54E-01	1.45E-01
6210.925	1.99E-01	1.85E-01	1.75E-01	1.66E-01	1.57E-01	1.48E-01
6210.875	2.02E-01	1.90E-01	1.80E-01	1.70E-01	1.60E-01	1.51E-01
6210.825	2.08E-01	1.96E-01	1.85E-01	1.74E-01	1.63E-01	1.56E-01
6210.775	2.13E-01	2.01E-01	1.89E-01	1.77E-01	1.67E-01	1.61E-01
6210.725	2.19E-01	2.06E-01	1.93E-01	1.81E-01	1.73E-01	1.70E-01
6210.675	2.26E-01	2.11E-01	1.98E-01	1.87E-01	1.82E-01	1.80E-01
6210.625	2.33E-01	2.17E-01	2.04E-01	1.96E-01	1.94E-01	1.95E-01
6210.575	2.40E-01	2.23E-01	2.12E-01	2.09E-01	2.10E-01	2.13E-01
6210.525	2.49E-01	2.33E-01	2.27E-01	2.26E-01	2.30E-01	2.33E-01
6210.475	2.58E-01	2.47E-01	2.45E-01	2.50E-01	2.53E-01	2.50E-01
6210.425	2.76E-01	2.71E-01	2.72E-01	2.77E-01	2.72E-01	2.62E-01
6210.375	3.03E-01	3.02E-01	3.04E-01	2.98E-01	2.86E-01	2.74E-01
6210.325	3.42E-01	3.41E-01	3.34E-01	3.15E-01	2.99E-01	2.87E-01
6210.275	3.91E-01	3.79E-01	3.54E-01	3.34E-01	3.20E-01	3.09E-01
6210.225	4.34E-01	4.03E-01	3.74E-01	3.57E-01	3.44E-01	3.29E-01
6210.175	4.69E-01	4.34E-01	4.09E-01	3.89E-01	3.69E-01	3.62E-01
6210.125	5.34E-01	4.78E-01	4.46E-01	4.27E-01	4.06E-01	3.91E-01
6210.075	5.94E-01	5.39E-01	4.92E-01	4.65E-01	4.41E-01	4.26E-01
6210.025	6.70E-01	5.92E-01	5.52E-01	5.20E-01	4.91E-01	4.69E-01
6209.975	7.45E-01	6.54E-01	6.16E-01	5.86E-01	5.50E-01	5.21E-01
6209.925	8.16E-01	7.56E-01	7.06E-01	6.51E-01	6.12E-01	5.71E-01
6209.875	9.35E-01	8.43E-01	7.80E-01	7.17E-01	6.68E-01	6.30E-01
6209.825	1.02E+00	9.38E-01	8.64E-01	7.94E-01	7.40E-01	6.97E-01
6209.775	1.02E+00	9.66E-01	8.90E-01	8.37E-01	7.84E-01	7.44E-01
6209.725	9.77E-01	9.29E-01	8.76E-01	8.45E-01	8.05E-01	7.69E-01
6209.675	9.23E-01	8.60E-01	8.47E-01	8.31E-01	8.12E-01	7.87E-01
6209.625	8.64E-01	8.04E-01	7.90E-01	7.96E-01	8.10E-01	8.10E-01
6209.575	7.58E-01	7.60E-01	7.54E-01	7.67E-01	8.03E-01	8.31E-01
6209.525	6.68E-01	6.90E-01	7.04E-01	7.38E-01	7.93E-01	8.61E-01
6209.475	6.12E-01	6.24E-01	6.57E-01	6.96E-01	7.63E-01	8.68E-01
6209.425	5.62E-01	5.87E-01	6.28E-01	6.79E-01	7.45E-01	8.59E-01
6209.375	5.52E-01	5.55E-01	5.85E-01	6.45E-01	7.40E-01	8.52E-01
6209.325	5.26E-01	5.43E-01	5.66E-01	6.11E-01	6.95E-01	8.39E-01
6209.275	4.93E-01	5.25E-01	5.60E-01	6.06E-01	6.77E-01	8.01E-01
6209.225	4.47E-01	4.83E-01	5.26E-01	5.75E-01	6.48E-01	7.64E-01
6209.175	4.08E-01	4.48E-01	4.91E-01	5.43E-01	6.09E-01	6.99E-01
6209.125	3.74E-01	4.10E-01	4.50E-01	5.02E-01	5.57E-01	6.17E-01
6209.075	3.40E-01	3.75E-01	4.11E-01	4.53E-01	5.00E-01	5.54E-01
6209.025	3.11E-01	3.38E-01	3.76E-01	4.09E-01	4.51E-01	4.86E-01
6208.975	2.92E-01	3.11E-01	3.37E-01	3.72E-01	3.99E-01	4.42E-01
6208.925	2.74E-01	2.85E-01	3.08E-01	3.31E-01	3.66E-01	4.07E-01
6208.875	2.59E-01	2.67E-01	2.79E-01	3.04E-01	3.36E-01	3.71E-01
6208.825	2.45E-01	2.49E-01	2.61E-01	2.84E-01	3.10E-01	3.29E-01
6208.775	2.31E-01	2.37E-01	2.50E-01	2.65E-01	2.85E-01	2.90E-01



APPENDIX B Dispersion Modelling

6208.725	2.21E-01	2.30E-01	2.39E-01	2.51E-01	2.59E-01	2.59E-01
6208.675	2.14E-01	2.22E-01	2.29E-01	2.36E-01	2.34E-01	2.33E-01
6208.625	2.08E-01	2.13E-01	2.19E-01	2.21E-01	2.14E-01	2.13E-01
6208.575	2.00E-01	2.05E-01	2.08E-01	2.04E-01	1.98E-01	1.95E-01
6208.525	1.93E-01	1.96E-01	1.96E-01	1.90E-01	1.85E-01	1.81E-01
6208.475	1.86E-01	1.87E-01	1.84E-01	1.78E-01	1.73E-01	1.69E-01
6208.425	1.78E-01	1.78E-01	1.72E-01	1.67E-01	1.63E-01	1.59E-01
6208.375	1.71E-01	1.68E-01	1.62E-01	1.58E-01	1.53E-01	1.50E-01
6208.325	1.63E-01	1.58E-01	1.54E-01	1.50E-01	1.45E-01	1.42E-01
6208.275	1.55E-01	1.50E-01	1.46E-01	1.42E-01	1.38E-01	1.36E-01
6208.225	1.47E-01	1.43E-01	1.39E-01	1.35E-01	1.31E-01	1.30E-01
6208.175	1.40E-01	1.36E-01	1.33E-01	1.29E-01	1.26E-01	1.25E-01
6208.125	1.34E-01	1.31E-01	1.27E-01	1.23E-01	1.20E-01	1.20E-01
6208.075	1.29E-01	1.25E-01	1.21E-01	1.18E-01	1.16E-01	1.15E-01
6208.025	1.23E-01	1.20E-01	1.16E-01	1.13E-01	1.12E-01	1.11E-01
6207.975	1.19E-01	1.15E-01	1.12E-01	1.09E-01	1.08E-01	1.07E-01
6207.925	1.14E-01	1.11E-01	1.07E-01	1.05E-01	1.04E-01	1.04E-01
6207.875	1.10E-01	1.07E-01	1.03E-01	1.01E-01	1.01E-01	1.00E-01
6207.825	1.05E-01	1.03E-01	9.99E-02	9.83E-02	9.77E-02	9.71E-02
6207.775	1.01E-01	9.89E-02	9.67E-02	9.55E-02	9.48E-02	9.40E-02
6207.725	9.73E-02	9.55E-02	9.38E-02	9.28E-02	9.21E-02	9.12E-02
6207.675	9.35E-02	9.22E-02	9.11E-02	9.03E-02	8.96E-02	8.86E-02
6207.625	9.00E-02	8.92E-02	8.85E-02	8.79E-02	8.72E-02	8.61E-02
6207.575	8.67E-02	8.63E-02	8.60E-02	8.57E-02	8.49E-02	8.38E-02
6207.525	8.36E-02	8.36E-02	8.37E-02	8.35E-02	8.28E-02	8.16E-02
6207.475	8.07E-02	8.11E-02	8.15E-02	8.14E-02	8.08E-02	7.95E-02
6207.425	7.81E-02	7.87E-02	7.94E-02	7.95E-02	7.88E-02	7.76E-02
6207.375	7.56E-02	7.65E-02	7.73E-02	7.75E-02	7.70E-02	7.57E-02

X (km): 617.175 617.225 617.275 617.325 617.375

Y (km)

6212.375	7.64E-02	7.62E-02	7.55E-02	7.44E-02	7.28E-02
6212.325	7.84E-02	7.80E-02	7.74E-02	7.62E-02	7.42E-02
6212.275	8.06E-02	8.01E-02	7.92E-02	7.79E-02	7.57E-02
6212.225	8.28E-02	8.21E-02	8.09E-02	7.91E-02	7.68E-02
6212.175	8.49E-02	8.39E-02	8.23E-02	8.00E-02	7.76E-02
6212.125	8.71E-02	8.57E-02	8.34E-02	8.10E-02	7.86E-02
6212.075	8.89E-02	8.69E-02	8.45E-02	8.19E-02	7.95E-02
6212.025	9.06E-02	8.86E-02	8.60E-02	8.31E-02	8.02E-02
6211.975	9.26E-02	9.02E-02	8.73E-02	8.44E-02	8.02E-02
6211.925	9.46E-02	9.18E-02	8.89E-02	8.60E-02	8.17E-02
6211.875	9.64E-02	9.33E-02	9.00E-02	8.55E-02	8.31E-02
6211.825	9.87E-02	9.51E-02	9.20E-02	8.90E-02	8.63E-02
6211.775	1.01E-01	9.77E-02	9.41E-02	9.10E-02	8.86E-02
6211.725	1.04E-01	9.98E-02	9.62E-02	9.30E-02	9.02E-02
6211.675	1.06E-01	1.02E-01	9.78E-02	9.48E-02	9.05E-02
6211.625	1.07E-01	1.04E-01	9.95E-02	9.51E-02	9.16E-02
6211.575	1.09E-01	1.05E-01	1.02E-01	9.82E-02	9.34E-02
6211.525	1.12E-01	1.08E-01	1.04E-01	1.01E-01	9.52E-02
6211.475	1.14E-01	1.11E-01	1.06E-01	1.01E-01	9.64E-02
6211.425	1.16E-01	1.12E-01	1.06E-01	1.02E-01	9.75E-02
6211.375	1.18E-01	1.13E-01	1.08E-01	1.03E-01	9.85E-02
6211.325	1.20E-01	1.15E-01	1.10E-01	1.05E-01	9.98E-02
6211.275	1.22E-01	1.17E-01	1.11E-01	1.06E-01	1.01E-01
6211.225	1.25E-01	1.19E-01	1.13E-01	1.07E-01	1.03E-01
6211.175	1.27E-01	1.21E-01	1.14E-01	1.09E-01	1.05E-01
6211.125	1.30E-01	1.23E-01	1.16E-01	1.11E-01	1.08E-01
6211.075	1.32E-01	1.25E-01	1.19E-01	1.14E-01	1.12E-01
6211.025	1.35E-01	1.28E-01	1.22E-01	1.19E-01	1.18E-01
6210.975	1.37E-01	1.31E-01	1.26E-01	1.25E-01	1.24E-01
6210.925	1.41E-01	1.35E-01	1.32E-01	1.31E-01	1.32E-01
6210.875	1.45E-01	1.41E-01	1.40E-01	1.40E-01	1.41E-01
6210.825	1.51E-01	1.49E-01	1.48E-01	1.50E-01	1.52E-01
6210.775	1.59E-01	1.59E-01	1.59E-01	1.61E-01	1.62E-01
6210.725	1.70E-01	1.70E-01	1.72E-01	1.73E-01	1.71E-01
6210.675	1.82E-01	1.85E-01	1.85E-01	1.82E-01	1.78E-01
6210.625	1.98E-01	1.99E-01	1.96E-01	1.90E-01	1.83E-01
6210.575	2.15E-01	2.12E-01	2.05E-01	1.96E-01	1.90E-01
6210.525	2.30E-01	2.21E-01	2.13E-01	2.04E-01	1.98E-01



APPENDIX B Dispersion Modelling

6210.475	2.41E-01	2.31E-01	2.20E-01	2.13E-01	2.07E-01
6210.425	2.51E-01	2.40E-01	2.31E-01	2.25E-01	2.19E-01
6210.375	2.63E-01	2.53E-01	2.44E-01	2.38E-01	2.33E-01
6210.325	2.79E-01	2.68E-01	2.61E-01	2.54E-01	2.48E-01
6210.275	2.98E-01	2.88E-01	2.80E-01	2.73E-01	2.65E-01
6210.225	3.21E-01	3.12E-01	3.01E-01	2.91E-01	2.83E-01
6210.175	3.48E-01	3.34E-01	3.23E-01	3.11E-01	3.02E-01
6210.125	3.75E-01	3.60E-01	3.47E-01	3.36E-01	3.24E-01
6210.075	4.08E-01	3.94E-01	3.78E-01	3.63E-01	3.53E-01
6210.025	4.50E-01	4.32E-01	4.14E-01	3.97E-01	3.83E-01
6209.975	4.95E-01	4.71E-01	4.50E-01	4.29E-01	4.12E-01
6209.925	5.39E-01	5.15E-01	4.88E-01	4.66E-01	4.48E-01
6209.875	5.92E-01	5.61E-01	5.37E-01	5.12E-01	4.89E-01
6209.825	6.56E-01	6.18E-01	5.86E-01	5.60E-01	5.34E-01
6209.775	7.09E-01	6.66E-01	6.34E-01	6.06E-01	5.76E-01
6209.725	7.53E-01	7.17E-01	6.80E-01	6.51E-01	6.18E-01
6209.675	7.82E-01	7.84E-01	7.34E-01	7.06E-01	6.56E-01
6209.625	7.99E-01	8.57E-01	8.22E-01	7.81E-01	6.85E-01
6209.575	8.36E-01	8.71E-01	9.82E-01	8.34E-01	7.53E-01
6209.525	8.96E-01	9.09E-01	8.88E-01	7.04E-01	9.06E-01
6209.475	9.59E-01	9.70E-01	8.85E-01	8.79E-01	9.42E-01
6209.425	1.01E+00	1.07E+00	1.04E+00	1.05E+00	9.97E-01
6209.375	1.05E+00	1.27E+00	1.29E+00	1.23E+00	1.09E+00
6209.325	1.07E+00	1.37E+00	1.71E+00	1.65E+00	1.27E+00
6209.275	1.03E+00	1.34E+00	2.31E+00	2.81E+00	1.94E+00
6209.225	9.42E-01	1.26E+00	2.14E+00	4.27E+00	2.53E+00
6209.175	8.16E-01	1.01E+00	1.30E+00	1.34E+00	1.30E+00
6209.125	7.05E-01	7.96E-01	9.51E-01	8.97E-01	8.08E-01
6209.075	6.02E-01	7.02E-01	7.25E-01	6.88E-01	6.32E-01
6209.025	5.47E-01	6.00E-01	5.90E-01	5.63E-01	5.34E-01
6208.975	4.95E-01	5.08E-01	4.99E-01	4.78E-01	4.63E-01
6208.925	4.35E-01	4.36E-01	4.32E-01	4.15E-01	4.07E-01
6208.875	3.79E-01	3.78E-01	3.78E-01	3.65E-01	3.61E-01
6208.825	3.33E-01	3.32E-01	3.34E-01	3.23E-01	3.22E-01
6208.775	2.95E-01	2.95E-01	2.97E-01	2.88E-01	2.89E-01
6208.725	2.62E-01	2.65E-01	2.66E-01	2.59E-01	2.61E-01
6208.675	2.34E-01	2.39E-01	2.40E-01	2.34E-01	2.36E-01
6208.625	2.12E-01	2.17E-01	2.17E-01	2.13E-01	2.15E-01
6208.575	1.94E-01	1.98E-01	1.97E-01	1.94E-01	1.97E-01
6208.525	1.80E-01	1.82E-01	1.80E-01	1.77E-01	1.81E-01
6208.475	1.68E-01	1.69E-01	1.66E-01	1.63E-01	1.66E-01
6208.425	1.58E-01	1.57E-01	1.54E-01	1.51E-01	1.53E-01
6208.375	1.49E-01	1.48E-01	1.43E-01	1.40E-01	1.42E-01
6208.325	1.42E-01	1.40E-01	1.35E-01	1.31E-01	1.32E-01
6208.275	1.35E-01	1.33E-01	1.27E-01	1.23E-01	1.24E-01
6208.225	1.29E-01	1.26E-01	1.21E-01	1.17E-01	1.17E-01
6208.175	1.24E-01	1.21E-01	1.16E-01	1.11E-01	1.11E-01
6208.125	1.19E-01	1.16E-01	1.11E-01	1.06E-01	1.05E-01
6208.075	1.14E-01	1.11E-01	1.06E-01	1.02E-01	1.01E-01
6208.025	1.10E-01	1.07E-01	1.02E-01	9.83E-02	9.70E-02
6207.975	1.06E-01	1.03E-01	9.82E-02	9.49E-02	9.35E-02
6207.925	1.02E-01	9.90E-02	9.47E-02	9.15E-02	9.02E-02
6207.875	9.87E-02	9.56E-02	9.14E-02	8.84E-02	8.73E-02
6207.825	9.54E-02	9.23E-02	8.84E-02	8.56E-02	8.45E-02
6207.775	9.23E-02	8.93E-02	8.55E-02	8.29E-02	8.18E-02
6207.725	8.95E-02	8.65E-02	8.28E-02	8.04E-02	7.94E-02
6207.675	8.68E-02	8.38E-02	8.03E-02	7.79E-02	7.70E-02
6207.625	8.42E-02	8.13E-02	7.79E-02	7.57E-02	7.49E-02
6207.575	8.19E-02	7.90E-02	7.57E-02	7.36E-02	7.27E-02
6207.525	7.96E-02	7.68E-02	7.36E-02	7.15E-02	7.07E-02
6207.475	7.75E-02	7.47E-02	7.17E-02	6.97E-02	6.89E-02
6207.425	7.56E-02	7.28E-02	6.98E-02	6.79E-02	6.71E-02
6207.375	7.38E-02	7.10E-02	6.81E-02	6.62E-02	6.55E-02

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 3
in microgram/m3

X (km): 612.375 612.425 612.475 612.525 612.575 612.625



APPENDIX B Dispersion Modelling

Y (km)						
6212.375	9.30E-02	9.37E-02	9.41E-02	9.49E-02	9.54E-02	9.58E-02
6212.325	9.31E-02	9.41E-02	9.53E-02	9.57E-02	9.66E-02	9.73E-02
6212.275	9.35E-02	9.47E-02	9.56E-02	9.69E-02	9.78E-02	9.82E-02
6212.225	9.31E-02	9.45E-02	9.61E-02	9.71E-02	9.87E-02	9.96E-02
6212.175	9.28E-02	9.45E-02	9.57E-02	9.74E-02	9.88E-02	9.98E-02
6212.125	9.20E-02	9.35E-02	9.55E-02	9.72E-02	9.88E-02	1.00E-01
6212.075	9.08E-02	9.30E-02	9.46E-02	9.66E-02	9.83E-02	9.98E-02
6212.025	9.01E-02	9.18E-02	9.39E-02	9.58E-02	9.75E-02	9.95E-02
6211.975	8.94E-02	9.13E-02	9.30E-02	9.46E-02	9.69E-02	9.88E-02
6211.925	8.93E-02	9.07E-02	9.24E-02	9.41E-02	9.58E-02	9.81E-02
6211.875	8.89E-02	9.07E-02	9.21E-02	9.35E-02	9.54E-02	9.73E-02
6211.825	8.90E-02	9.05E-02	9.17E-02	9.35E-02	9.51E-02	9.69E-02
6211.775	8.86E-02	9.03E-02	9.18E-02	9.33E-02	9.50E-02	9.66E-02
6211.725	8.82E-02	8.98E-02	9.13E-02	9.31E-02	9.47E-02	9.62E-02
6211.675	8.76E-02	8.90E-02	9.09E-02	9.26E-02	9.42E-02	9.62E-02
6211.625	8.68E-02	8.85E-02	9.02E-02	9.20E-02	9.39E-02	9.57E-02
6211.575	8.60E-02	8.77E-02	8.96E-02	9.13E-02	9.31E-02	9.49E-02
6211.525	8.48E-02	8.68E-02	8.85E-02	9.03E-02	9.23E-02	9.40E-02
6211.475	8.39E-02	8.57E-02	8.74E-02	8.94E-02	9.11E-02	9.29E-02
6211.425	8.28E-02	8.47E-02	8.65E-02	8.82E-02	9.00E-02	9.19E-02
6211.375	8.18E-02	8.35E-02	8.53E-02	8.70E-02	8.87E-02	9.05E-02
6211.325	8.07E-02	8.23E-02	8.42E-02	8.57E-02	8.75E-02	8.93E-02
6211.275	7.98E-02	8.14E-02	8.29E-02	8.45E-02	8.63E-02	8.81E-02
6211.225	7.93E-02	8.07E-02	8.22E-02	8.37E-02	8.54E-02	8.70E-02
6211.175	7.91E-02	8.05E-02	8.19E-02	8.33E-02	8.48E-02	8.63E-02
6211.125	7.93E-02	8.07E-02	8.18E-02	8.32E-02	8.46E-02	8.60E-02
6211.075	7.97E-02	8.09E-02	8.21E-02	8.35E-02	8.47E-02	8.58E-02
6211.025	8.02E-02	8.13E-02	8.26E-02	8.36E-02	8.48E-02	8.60E-02
6210.975	8.06E-02	8.20E-02	8.30E-02	8.41E-02	8.51E-02	8.63E-02
6210.925	8.11E-02	8.23E-02	8.34E-02	8.44E-02	8.57E-02	8.65E-02
6210.875	8.16E-02	8.26E-02	8.40E-02	8.50E-02	8.59E-02	8.69E-02
6210.825	8.19E-02	8.32E-02	8.43E-02	8.54E-02	8.65E-02	8.78E-02
6210.775	8.22E-02	8.34E-02	8.45E-02	8.57E-02	8.72E-02	8.85E-02
6210.725	8.22E-02	8.35E-02	8.47E-02	8.61E-02	8.74E-02	8.90E-02
6210.675	8.25E-02	8.38E-02	8.50E-02	8.63E-02	8.77E-02	8.92E-02
6210.625	8.32E-02	8.43E-02	8.55E-02	8.68E-02	8.80E-02	8.96E-02
6210.575	8.43E-02	8.53E-02	8.64E-02	8.77E-02	8.88E-02	9.02E-02
6210.525	8.55E-02	8.66E-02	8.77E-02	8.88E-02	9.00E-02	9.12E-02
6210.475	8.71E-02	8.82E-02	8.93E-02	9.03E-02	9.14E-02	9.26E-02
6210.425	8.87E-02	8.97E-02	9.07E-02	9.19E-02	9.31E-02	9.45E-02
6210.375	9.01E-02	9.12E-02	9.23E-02	9.34E-02	9.49E-02	9.63E-02
6210.325	9.17E-02	9.28E-02	9.40E-02	9.52E-02	9.65E-02	9.78E-02
6210.275	9.31E-02	9.42E-02	9.54E-02	9.67E-02	9.80E-02	9.92E-02
6210.225	9.41E-02	9.53E-02	9.64E-02	9.77E-02	9.90E-02	1.01E-01
6210.175	9.48E-02	9.60E-02	9.73E-02	9.86E-02	1.00E-01	1.02E-01
6210.125	9.56E-02	9.69E-02	9.83E-02	9.96E-02	1.01E-01	1.02E-01
6210.075	9.65E-02	9.78E-02	9.91E-02	1.00E-01	1.02E-01	1.03E-01
6210.025	9.75E-02	9.88E-02	1.00E-01	1.01E-01	1.03E-01	1.04E-01
6209.975	9.82E-02	9.95E-02	1.01E-01	1.02E-01	1.04E-01	1.05E-01
6209.925	9.87E-02	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01
6209.875	9.90E-02	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01
6209.825	9.89E-02	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01
6209.775	9.87E-02	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01
6209.725	9.85E-02	9.99E-02	1.01E-01	1.03E-01	1.04E-01	1.06E-01
6209.675	9.80E-02	9.94E-02	1.01E-01	1.02E-01	1.04E-01	1.05E-01
6209.625	9.70E-02	9.83E-02	9.98E-02	1.01E-01	1.03E-01	1.04E-01
6209.575	9.57E-02	9.71E-02	9.85E-02	9.98E-02	1.01E-01	1.03E-01
6209.525	9.40E-02	9.54E-02	9.67E-02	9.80E-02	9.94E-02	1.01E-01
6209.475	9.24E-02	9.37E-02	9.50E-02	9.63E-02	9.75E-02	9.88E-02
6209.425	9.07E-02	9.19E-02	9.32E-02	9.44E-02	9.55E-02	9.68E-02
6209.375	8.87E-02	8.99E-02	9.12E-02	9.24E-02	9.36E-02	9.48E-02
6209.325	8.70E-02	8.81E-02	8.93E-02	9.06E-02	9.19E-02	9.32E-02
6209.275	8.58E-02	8.70E-02	8.81E-02	8.94E-02	9.07E-02	9.21E-02
6209.225	8.51E-02	8.64E-02	8.76E-02	8.89E-02	9.02E-02	9.15E-02
6209.175	8.47E-02	8.60E-02	8.73E-02	8.87E-02	9.01E-02	9.16E-02
6209.125	8.46E-02	8.59E-02	8.73E-02	8.87E-02	9.02E-02	9.17E-02
6209.075	8.49E-02	8.62E-02	8.76E-02	8.90E-02	9.04E-02	9.20E-02
6209.025	8.53E-02	8.67E-02	8.81E-02	8.95E-02	9.09E-02	9.24E-02
6208.975	8.57E-02	8.72E-02	8.86E-02	9.00E-02	9.15E-02	9.30E-02



APPENDIX B Dispersion Modelling

6208.925	8.62E-02	8.76E-02	8.89E-02	9.05E-02	9.19E-02	9.34E-02
6208.875	8.66E-02	8.78E-02	8.92E-02	9.07E-02	9.21E-02	9.36E-02
6208.825	8.67E-02	8.80E-02	8.93E-02	9.07E-02	9.21E-02	9.37E-02
6208.775	8.67E-02	8.79E-02	8.93E-02	9.07E-02	9.21E-02	9.38E-02
6208.725	8.67E-02	8.80E-02	8.94E-02	9.08E-02	9.22E-02	9.38E-02
6208.675	8.68E-02	8.81E-02	8.95E-02	9.09E-02	9.24E-02	9.42E-02
6208.625	8.70E-02	8.85E-02	8.99E-02	9.15E-02	9.31E-02	9.47E-02
6208.575	8.74E-02	8.89E-02	9.05E-02	9.24E-02	9.41E-02	9.58E-02
6208.525	8.82E-02	8.98E-02	9.15E-02	9.34E-02	9.52E-02	9.72E-02
6208.475	8.92E-02	9.10E-02	9.28E-02	9.46E-02	9.68E-02	9.89E-02
6208.425	9.05E-02	9.24E-02	9.43E-02	9.65E-02	9.85E-02	1.01E-01
6208.375	9.21E-02	9.40E-02	9.61E-02	9.82E-02	1.00E-01	1.03E-01
6208.325	9.37E-02	9.57E-02	9.79E-02	9.99E-02	1.02E-01	1.04E-01
6208.275	9.53E-02	9.73E-02	9.93E-02	1.01E-01	1.03E-01	1.05E-01
6208.225	9.65E-02	9.85E-02	1.00E-01	1.02E-01	1.04E-01	1.05E-01
6208.175	9.73E-02	9.89E-02	1.01E-01	1.02E-01	1.03E-01	1.05E-01
6208.125	9.74E-02	9.87E-02	9.99E-02	1.01E-01	1.02E-01	1.03E-01
6208.075	9.69E-02	9.79E-02	9.89E-02	9.99E-02	1.01E-01	1.02E-01
6208.025	9.58E-02	9.67E-02	9.76E-02	9.83E-02	9.91E-02	9.99E-02
6207.975	9.44E-02	9.51E-02	9.59E-02	9.65E-02	9.73E-02	9.78E-02
6207.925	9.27E-02	9.33E-02	9.40E-02	9.45E-02	9.51E-02	9.57E-02
6207.875	9.08E-02	9.14E-02	9.20E-02	9.26E-02	9.32E-02	9.38E-02
6207.825	8.90E-02	8.95E-02	9.02E-02	9.08E-02	9.14E-02	9.22E-02
6207.775	8.73E-02	8.79E-02	8.85E-02	8.92E-02	9.00E-02	9.08E-02
6207.725	8.59E-02	8.66E-02	8.73E-02	8.80E-02	8.90E-02	8.99E-02
6207.675	8.48E-02	8.55E-02	8.64E-02	8.73E-02	8.82E-02	8.92E-02
6207.625	8.40E-02	8.49E-02	8.57E-02	8.67E-02	8.78E-02	8.89E-02
6207.575	8.34E-02	8.43E-02	8.54E-02	8.64E-02	8.74E-02	8.85E-02
6207.525	8.30E-02	8.40E-02	8.50E-02	8.61E-02	8.72E-02	8.81E-02
6207.475	8.27E-02	8.37E-02	8.48E-02	8.57E-02	8.67E-02	8.77E-02
6207.425	8.25E-02	8.34E-02	8.44E-02	8.53E-02	8.61E-02	8.68E-02
6207.375	8.21E-02	8.30E-02	8.39E-02	8.46E-02	8.52E-02	8.57E-02

X (km): 612.675 612.725 612.775 612.825 612.875 612.925

Y (km)

6212.375	9.66E-02	9.70E-02	9.80E-02	9.84E-02	9.95E-02	1.00E-01
6212.325	9.77E-02	9.85E-02	9.89E-02	9.99E-02	1.00E-01	1.01E-01
6212.275	9.91E-02	9.96E-02	1.00E-01	1.01E-01	1.02E-01	1.03E-01
6212.225	1.00E-01	1.01E-01	1.02E-01	1.02E-01	1.03E-01	1.04E-01
6212.175	1.01E-01	1.02E-01	1.03E-01	1.04E-01	1.04E-01	1.05E-01
6212.125	1.01E-01	1.03E-01	1.04E-01	1.05E-01	1.06E-01	1.07E-01
6212.075	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.07E-01	1.08E-01
6212.025	1.01E-01	1.03E-01	1.05E-01	1.06E-01	1.08E-01	1.09E-01
6211.975	1.01E-01	1.03E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01
6211.925	1.00E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01
6211.875	9.90E-02	1.01E-01	1.03E-01	1.05E-01	1.08E-01	1.10E-01
6211.825	9.86E-02	1.00E-01	1.03E-01	1.05E-01	1.07E-01	1.09E-01
6211.775	9.82E-02	1.00E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01
6211.725	9.81E-02	9.98E-02	1.02E-01	1.03E-01	1.05E-01	1.08E-01
6211.675	9.79E-02	9.97E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01
6211.625	9.76E-02	9.93E-02	1.01E-01	1.03E-01	1.05E-01	1.06E-01
6211.575	9.68E-02	9.87E-02	1.01E-01	1.03E-01	1.04E-01	1.06E-01
6211.525	9.59E-02	9.79E-02	9.99E-02	1.02E-01	1.04E-01	1.06E-01
6211.475	9.50E-02	9.68E-02	9.89E-02	1.01E-01	1.03E-01	1.05E-01
6211.425	9.37E-02	9.57E-02	9.80E-02	9.99E-02	1.02E-01	1.04E-01
6211.375	9.24E-02	9.46E-02	9.66E-02	9.86E-02	1.01E-01	1.03E-01
6211.325	9.12E-02	9.31E-02	9.52E-02	9.75E-02	9.96E-02	1.02E-01
6211.275	8.99E-02	9.18E-02	9.40E-02	9.60E-02	9.85E-02	1.01E-01
6211.225	8.87E-02	9.07E-02	9.25E-02	9.47E-02	9.71E-02	9.92E-02
6211.175	8.80E-02	8.94E-02	9.12E-02	9.36E-02	9.57E-02	9.79E-02
6211.125	8.73E-02	8.87E-02	9.06E-02	9.24E-02	9.44E-02	9.69E-02
6211.075	8.71E-02	8.86E-02	9.00E-02	9.17E-02	9.38E-02	9.58E-02
6211.025	8.74E-02	8.84E-02	8.97E-02	9.15E-02	9.33E-02	9.51E-02
6210.975	8.73E-02	8.84E-02	9.00E-02	9.15E-02	9.29E-02	9.49E-02
6210.925	8.75E-02	8.88E-02	9.02E-02	9.16E-02	9.32E-02	9.49E-02
6210.875	8.83E-02	8.95E-02	9.08E-02	9.22E-02	9.38E-02	9.53E-02
6210.825	8.91E-02	9.03E-02	9.16E-02	9.32E-02	9.45E-02	9.58E-02
6210.775	8.99E-02	9.11E-02	9.26E-02	9.41E-02	9.54E-02	9.66E-02
6210.725	9.02E-02	9.18E-02	9.33E-02	9.49E-02	9.62E-02	9.77E-02



APPENDIX B Dispersion Modelling

6210.675	9.07E-02	9.20E-02	9.35E-02	9.50E-02	9.69E-02	9.83E-02
6210.625	9.11E-02	9.25E-02	9.38E-02	9.55E-02	9.71E-02	9.86E-02
6210.575	9.16E-02	9.31E-02	9.45E-02	9.61E-02	9.76E-02	9.91E-02
6210.525	9.24E-02	9.40E-02	9.54E-02	9.69E-02	9.83E-02	1.00E-01
6210.475	9.39E-02	9.53E-02	9.67E-02	9.80E-02	9.95E-02	1.01E-01
6210.425	9.57E-02	9.70E-02	9.83E-02	9.96E-02	1.01E-01	1.02E-01
6210.375	9.75E-02	9.87E-02	9.99E-02	1.01E-01	1.03E-01	1.04E-01
6210.325	9.91E-02	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01
6210.275	1.01E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.08E-01
6210.225	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.08E-01	1.09E-01
6210.175	1.03E-01	1.04E-01	1.06E-01	1.07E-01	1.09E-01	1.11E-01
6210.125	1.04E-01	1.05E-01	1.07E-01	1.09E-01	1.10E-01	1.12E-01
6210.075	1.05E-01	1.06E-01	1.08E-01	1.09E-01	1.11E-01	1.13E-01
6210.025	1.06E-01	1.07E-01	1.09E-01	1.10E-01	1.12E-01	1.14E-01
6209.975	1.07E-01	1.08E-01	1.10E-01	1.12E-01	1.13E-01	1.15E-01
6209.925	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.14E-01	1.16E-01
6209.875	1.08E-01	1.10E-01	1.11E-01	1.13E-01	1.15E-01	1.16E-01
6209.825	1.08E-01	1.10E-01	1.11E-01	1.13E-01	1.15E-01	1.17E-01
6209.775	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01	1.17E-01
6209.725	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01	1.16E-01
6209.675	1.07E-01	1.09E-01	1.11E-01	1.12E-01	1.14E-01	1.16E-01
6209.625	1.06E-01	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6209.575	1.04E-01	1.06E-01	1.08E-01	1.09E-01	1.11E-01	1.13E-01
6209.525	1.02E-01	1.04E-01	1.05E-01	1.07E-01	1.09E-01	1.11E-01
6209.475	1.00E-01	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.08E-01
6209.425	9.81E-02	9.94E-02	1.01E-01	1.02E-01	1.04E-01	1.06E-01
6209.375	9.61E-02	9.74E-02	9.88E-02	1.00E-01	1.02E-01	1.04E-01
6209.325	9.45E-02	9.60E-02	9.74E-02	9.90E-02	1.01E-01	1.02E-01
6209.275	9.35E-02	9.51E-02	9.66E-02	9.82E-02	1.00E-01	1.02E-01
6209.225	9.30E-02	9.46E-02	9.62E-02	9.81E-02	9.98E-02	1.02E-01
6209.175	9.30E-02	9.46E-02	9.63E-02	9.80E-02	9.98E-02	1.02E-01
6209.125	9.33E-02	9.50E-02	9.66E-02	9.83E-02	1.00E-01	1.02E-01
6209.075	9.36E-02	9.53E-02	9.71E-02	9.88E-02	1.01E-01	1.03E-01
6209.025	9.40E-02	9.57E-02	9.75E-02	9.93E-02	1.01E-01	1.03E-01
6208.975	9.45E-02	9.61E-02	9.79E-02	9.96E-02	1.01E-01	1.03E-01
6208.925	9.50E-02	9.65E-02	9.82E-02	9.97E-02	1.01E-01	1.03E-01
6208.875	9.51E-02	9.67E-02	9.82E-02	9.98E-02	1.01E-01	1.03E-01
6208.825	9.53E-02	9.68E-02	9.84E-02	9.98E-02	1.02E-01	1.03E-01
6208.775	9.53E-02	9.68E-02	9.84E-02	1.00E-01	1.02E-01	1.04E-01
6208.725	9.53E-02	9.70E-02	9.87E-02	1.00E-01	1.02E-01	1.04E-01
6208.675	9.58E-02	9.74E-02	9.92E-02	1.01E-01	1.03E-01	1.05E-01
6208.625	9.66E-02	9.85E-02	1.00E-01	1.02E-01	1.05E-01	1.07E-01
6208.575	9.77E-02	9.99E-02	1.02E-01	1.04E-01	1.07E-01	1.09E-01
6208.525	9.93E-02	1.02E-01	1.04E-01	1.06E-01	1.09E-01	1.11E-01
6208.475	1.01E-01	1.03E-01	1.06E-01	1.08E-01	1.11E-01	1.13E-01
6208.425	1.03E-01	1.06E-01	1.08E-01	1.10E-01	1.13E-01	1.15E-01
6208.375	1.05E-01	1.07E-01	1.09E-01	1.12E-01	1.14E-01	1.16E-01
6208.325	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.14E-01	1.15E-01
6208.275	1.07E-01	1.09E-01	1.10E-01	1.12E-01	1.13E-01	1.15E-01
6208.225	1.07E-01	1.08E-01	1.09E-01	1.11E-01	1.12E-01	1.13E-01
6208.175	1.06E-01	1.07E-01	1.08E-01	1.09E-01	1.10E-01	1.11E-01
6208.125	1.04E-01	1.05E-01	1.06E-01	1.07E-01	1.08E-01	1.09E-01
6208.075	1.03E-01	1.03E-01	1.04E-01	1.05E-01	1.06E-01	1.06E-01
6208.025	1.01E-01	1.01E-01	1.02E-01	1.03E-01	1.03E-01	1.04E-01
6207.975	9.85E-02	9.92E-02	9.98E-02	1.00E-01	1.01E-01	1.02E-01
6207.925	9.64E-02	9.71E-02	9.77E-02	9.85E-02	9.93E-02	1.00E-01
6207.875	9.45E-02	9.52E-02	9.60E-02	9.69E-02	9.79E-02	9.90E-02
6207.825	9.29E-02	9.37E-02	9.48E-02	9.58E-02	9.68E-02	9.81E-02
6207.775	9.17E-02	9.28E-02	9.38E-02	9.50E-02	9.62E-02	9.75E-02
6207.725	9.09E-02	9.20E-02	9.32E-02	9.44E-02	9.57E-02	9.70E-02
6207.675	9.04E-02	9.15E-02	9.27E-02	9.40E-02	9.51E-02	9.63E-02
6207.625	9.00E-02	9.12E-02	9.23E-02	9.34E-02	9.45E-02	9.55E-02
6207.575	8.96E-02	9.06E-02	9.18E-02	9.27E-02	9.35E-02	9.43E-02
6207.525	8.91E-02	9.01E-02	9.08E-02	9.16E-02	9.23E-02	9.27E-02
6207.475	8.84E-02	8.91E-02	8.98E-02	9.02E-02	9.06E-02	9.10E-02
6207.425	8.74E-02	8.79E-02	8.82E-02	8.85E-02	8.87E-02	8.88E-02
6207.375	8.60E-02	8.63E-02	8.65E-02	8.65E-02	8.66E-02	8.66E-02

X (km): 612.975 613.025 613.075 613.125 613.175 613.225



APPENDIX B Dispersion Modelling

Y (km)

6212.375	1.01E-01	1.03E-01	1.04E-01	1.05E-01	1.06E-01	1.07E-01
6212.325	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.07E-01	1.08E-01
6212.275	1.03E-01	1.04E-01	1.05E-01	1.07E-01	1.08E-01	1.09E-01
6212.225	1.05E-01	1.05E-01	1.07E-01	1.07E-01	1.09E-01	1.10E-01
6212.175	1.06E-01	1.07E-01	1.07E-01	1.09E-01	1.10E-01	1.11E-01
6212.125	1.07E-01	1.08E-01	1.09E-01	1.10E-01	1.11E-01	1.12E-01
6212.075	1.09E-01	1.10E-01	1.10E-01	1.11E-01	1.12E-01	1.13E-01
6212.025	1.10E-01	1.11E-01	1.12E-01	1.13E-01	1.14E-01	1.15E-01
6211.975	1.11E-01	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.16E-01
6211.925	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.17E-01	1.18E-01
6211.875	1.11E-01	1.13E-01	1.15E-01	1.17E-01	1.18E-01	1.19E-01
6211.825	1.11E-01	1.13E-01	1.15E-01	1.17E-01	1.19E-01	1.21E-01
6211.775	1.11E-01	1.13E-01	1.15E-01	1.17E-01	1.20E-01	1.21E-01
6211.725	1.10E-01	1.12E-01	1.15E-01	1.17E-01	1.19E-01	1.21E-01
6211.675	1.09E-01	1.12E-01	1.14E-01	1.17E-01	1.19E-01	1.22E-01
6211.625	1.09E-01	1.11E-01	1.13E-01	1.16E-01	1.18E-01	1.21E-01
6211.575	1.08E-01	1.11E-01	1.13E-01	1.15E-01	1.18E-01	1.20E-01
6211.525	1.08E-01	1.10E-01	1.12E-01	1.15E-01	1.17E-01	1.20E-01
6211.475	1.07E-01	1.10E-01	1.12E-01	1.14E-01	1.17E-01	1.19E-01
6211.425	1.07E-01	1.09E-01	1.11E-01	1.14E-01	1.16E-01	1.19E-01
6211.375	1.06E-01	1.08E-01	1.11E-01	1.13E-01	1.16E-01	1.18E-01
6211.325	1.04E-01	1.07E-01	1.10E-01	1.12E-01	1.15E-01	1.18E-01
6211.275	1.03E-01	1.06E-01	1.08E-01	1.11E-01	1.14E-01	1.17E-01
6211.225	1.02E-01	1.04E-01	1.07E-01	1.10E-01	1.13E-01	1.16E-01
6211.175	1.01E-01	1.03E-01	1.06E-01	1.08E-01	1.11E-01	1.14E-01
6211.125	9.92E-02	1.02E-01	1.04E-01	1.07E-01	1.10E-01	1.13E-01
6211.075	9.79E-02	1.01E-01	1.03E-01	1.06E-01	1.08E-01	1.11E-01
6211.025	9.74E-02	9.97E-02	1.02E-01	1.05E-01	1.07E-01	1.10E-01
6210.975	9.69E-02	9.91E-02	1.01E-01	1.04E-01	1.06E-01	1.09E-01
6210.925	9.68E-02	9.85E-02	1.01E-01	1.03E-01	1.05E-01	1.08E-01
6210.875	9.67E-02	9.87E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01
6210.825	9.73E-02	9.89E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01
6210.775	9.80E-02	9.95E-02	1.01E-01	1.03E-01	1.05E-01	1.07E-01
6210.725	9.89E-02	1.00E-01	1.02E-01	1.04E-01	1.05E-01	1.07E-01
6210.675	9.98E-02	1.01E-01	1.03E-01	1.04E-01	1.06E-01	1.08E-01
6210.625	1.00E-01	1.02E-01	1.04E-01	1.05E-01	1.07E-01	1.09E-01
6210.575	1.01E-01	1.02E-01	1.04E-01	1.06E-01	1.08E-01	1.10E-01
6210.525	1.01E-01	1.03E-01	1.05E-01	1.07E-01	1.09E-01	1.10E-01
6210.475	1.02E-01	1.04E-01	1.06E-01	1.07E-01	1.09E-01	1.11E-01
6210.425	1.04E-01	1.05E-01	1.07E-01	1.09E-01	1.10E-01	1.12E-01
6210.375	1.06E-01	1.07E-01	1.09E-01	1.11E-01	1.12E-01	1.14E-01
6210.325	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.14E-01	1.16E-01
6210.275	1.10E-01	1.11E-01	1.13E-01	1.15E-01	1.16E-01	1.18E-01
6210.225	1.11E-01	1.13E-01	1.15E-01	1.16E-01	1.18E-01	1.20E-01
6210.175	1.13E-01	1.14E-01	1.16E-01	1.18E-01	1.20E-01	1.22E-01
6210.125	1.13E-01	1.15E-01	1.17E-01	1.19E-01	1.21E-01	1.23E-01
6210.075	1.14E-01	1.16E-01	1.18E-01	1.20E-01	1.22E-01	1.24E-01
6210.025	1.16E-01	1.17E-01	1.19E-01	1.21E-01	1.23E-01	1.25E-01
6209.975	1.17E-01	1.19E-01	1.21E-01	1.23E-01	1.25E-01	1.27E-01
6209.925	1.18E-01	1.20E-01	1.22E-01	1.24E-01	1.26E-01	1.28E-01
6209.875	1.19E-01	1.21E-01	1.23E-01	1.25E-01	1.27E-01	1.29E-01
6209.825	1.19E-01	1.20E-01	1.23E-01	1.25E-01	1.27E-01	1.29E-01
6209.775	1.18E-01	1.20E-01	1.23E-01	1.25E-01	1.27E-01	1.29E-01
6209.725	1.18E-01	1.20E-01	1.23E-01	1.25E-01	1.27E-01	1.30E-01
6209.675	1.18E-01	1.20E-01	1.22E-01	1.24E-01	1.27E-01	1.29E-01
6209.625	1.17E-01	1.19E-01	1.21E-01	1.23E-01	1.25E-01	1.28E-01
6209.575	1.15E-01	1.17E-01	1.19E-01	1.21E-01	1.23E-01	1.26E-01
6209.525	1.12E-01	1.14E-01	1.16E-01	1.18E-01	1.20E-01	1.23E-01
6209.475	1.10E-01	1.12E-01	1.14E-01	1.16E-01	1.18E-01	1.20E-01
6209.425	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01	1.17E-01
6209.375	1.06E-01	1.08E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6209.325	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.14E-01
6209.275	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.14E-01
6209.225	1.03E-01	1.05E-01	1.07E-01	1.09E-01	1.12E-01	1.14E-01
6209.175	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.14E-01
6209.125	1.04E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.14E-01
6209.075	1.05E-01	1.06E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6209.025	1.05E-01	1.07E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6208.975	1.05E-01	1.07E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6208.925	1.05E-01	1.07E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01



APPENDIX B Dispersion Modelling

6208.875	1.05E-01	1.07E-01	1.09E-01	1.11E-01	1.13E-01	1.15E-01
6208.825	1.05E-01	1.07E-01	1.09E-01	1.11E-01	1.14E-01	1.16E-01
6208.775	1.05E-01	1.07E-01	1.10E-01	1.12E-01	1.14E-01	1.17E-01
6208.725	1.06E-01	1.08E-01	1.11E-01	1.13E-01	1.16E-01	1.19E-01
6208.675	1.07E-01	1.10E-01	1.13E-01	1.15E-01	1.18E-01	1.21E-01
6208.625	1.09E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.24E-01
6208.575	1.12E-01	1.14E-01	1.17E-01	1.20E-01	1.23E-01	1.26E-01
6208.525	1.14E-01	1.17E-01	1.19E-01	1.22E-01	1.25E-01	1.28E-01
6208.475	1.16E-01	1.19E-01	1.21E-01	1.23E-01	1.26E-01	1.28E-01
6208.425	1.17E-01	1.19E-01	1.22E-01	1.24E-01	1.25E-01	1.27E-01
6208.375	1.18E-01	1.19E-01	1.21E-01	1.23E-01	1.24E-01	1.26E-01
6208.325	1.17E-01	1.19E-01	1.20E-01	1.21E-01	1.23E-01	1.24E-01
6208.275	1.16E-01	1.17E-01	1.18E-01	1.19E-01	1.21E-01	1.22E-01
6208.225	1.14E-01	1.15E-01	1.16E-01	1.17E-01	1.18E-01	1.19E-01
6208.175	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.15E-01	1.16E-01
6208.125	1.09E-01	1.10E-01	1.11E-01	1.12E-01	1.13E-01	1.14E-01
6208.075	1.07E-01	1.08E-01	1.09E-01	1.10E-01	1.11E-01	1.12E-01
6208.025	1.05E-01	1.06E-01	1.07E-01	1.08E-01	1.09E-01	1.10E-01
6207.975	1.03E-01	1.04E-01	1.05E-01	1.06E-01	1.07E-01	1.09E-01
6207.925	1.01E-01	1.02E-01	1.04E-01	1.05E-01	1.07E-01	1.08E-01
6207.875	1.00E-01	1.01E-01	1.03E-01	1.04E-01	1.06E-01	1.07E-01
6207.825	9.94E-02	1.01E-01	1.02E-01	1.04E-01	1.05E-01	1.06E-01
6207.775	9.89E-02	1.00E-01	1.01E-01	1.03E-01	1.04E-01	1.05E-01
6207.725	9.82E-02	9.95E-02	1.01E-01	1.02E-01	1.03E-01	1.03E-01
6207.675	9.75E-02	9.84E-02	9.94E-02	1.00E-01	1.01E-01	1.01E-01
6207.625	9.63E-02	9.72E-02	9.78E-02	9.84E-02	9.88E-02	9.91E-02
6207.575	9.49E-02	9.54E-02	9.59E-02	9.63E-02	9.64E-02	9.67E-02
6207.525	9.32E-02	9.35E-02	9.37E-02	9.39E-02	9.40E-02	9.43E-02
6207.475	9.11E-02	9.12E-02	9.14E-02	9.15E-02	9.18E-02	9.23E-02
6207.425	8.89E-02	8.89E-02	8.91E-02	8.95E-02	9.00E-02	9.06E-02
6207.375	8.66E-02	8.69E-02	8.73E-02	8.78E-02	8.85E-02	8.94E-02

X (km): 613.275 613.325 613.375 613.425 613.475 613.525

Y (km)

6212.375	1.08E-01	1.09E-01	1.10E-01	1.11E-01	1.13E-01	1.15E-01
6212.325	1.10E-01	1.11E-01	1.11E-01	1.12E-01	1.14E-01	1.15E-01
6212.275	1.11E-01	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.16E-01
6212.225	1.12E-01	1.13E-01	1.14E-01	1.15E-01	1.16E-01	1.17E-01
6212.175	1.13E-01	1.14E-01	1.15E-01	1.17E-01	1.18E-01	1.19E-01
6212.125	1.14E-01	1.15E-01	1.17E-01	1.18E-01	1.19E-01	1.20E-01
6212.075	1.15E-01	1.16E-01	1.17E-01	1.19E-01	1.21E-01	1.22E-01
6212.025	1.15E-01	1.17E-01	1.18E-01	1.20E-01	1.22E-01	1.23E-01
6211.975	1.17E-01	1.18E-01	1.19E-01	1.21E-01	1.23E-01	1.24E-01
6211.925	1.19E-01	1.20E-01	1.21E-01	1.22E-01	1.24E-01	1.25E-01
6211.875	1.20E-01	1.21E-01	1.22E-01	1.24E-01	1.25E-01	1.26E-01
6211.825	1.22E-01	1.23E-01	1.24E-01	1.25E-01	1.26E-01	1.28E-01
6211.775	1.23E-01	1.24E-01	1.26E-01	1.27E-01	1.28E-01	1.29E-01
6211.725	1.24E-01	1.25E-01	1.27E-01	1.28E-01	1.30E-01	1.31E-01
6211.675	1.23E-01	1.26E-01	1.28E-01	1.30E-01	1.31E-01	1.33E-01
6211.625	1.24E-01	1.26E-01	1.29E-01	1.31E-01	1.33E-01	1.35E-01
6211.575	1.23E-01	1.25E-01	1.28E-01	1.30E-01	1.33E-01	1.35E-01
6211.525	1.22E-01	1.25E-01	1.28E-01	1.31E-01	1.33E-01	1.36E-01
6211.475	1.22E-01	1.24E-01	1.27E-01	1.30E-01	1.33E-01	1.36E-01
6211.425	1.21E-01	1.24E-01	1.27E-01	1.29E-01	1.32E-01	1.35E-01
6211.375	1.21E-01	1.24E-01	1.26E-01	1.29E-01	1.32E-01	1.35E-01
6211.325	1.20E-01	1.23E-01	1.26E-01	1.29E-01	1.31E-01	1.35E-01
6211.275	1.20E-01	1.23E-01	1.26E-01	1.28E-01	1.31E-01	1.34E-01
6211.225	1.19E-01	1.21E-01	1.25E-01	1.28E-01	1.31E-01	1.34E-01
6211.175	1.17E-01	1.20E-01	1.24E-01	1.27E-01	1.30E-01	1.33E-01
6211.125	1.16E-01	1.19E-01	1.22E-01	1.26E-01	1.29E-01	1.32E-01
6211.075	1.14E-01	1.17E-01	1.21E-01	1.24E-01	1.27E-01	1.31E-01
6211.025	1.13E-01	1.16E-01	1.19E-01	1.22E-01	1.26E-01	1.29E-01
6210.975	1.11E-01	1.14E-01	1.17E-01	1.20E-01	1.24E-01	1.27E-01
6210.925	1.10E-01	1.13E-01	1.16E-01	1.19E-01	1.22E-01	1.26E-01
6210.875	1.10E-01	1.12E-01	1.15E-01	1.18E-01	1.21E-01	1.24E-01
6210.825	1.09E-01	1.12E-01	1.14E-01	1.17E-01	1.20E-01	1.23E-01
6210.775	1.09E-01	1.11E-01	1.14E-01	1.16E-01	1.19E-01	1.22E-01
6210.725	1.09E-01	1.11E-01	1.14E-01	1.16E-01	1.19E-01	1.22E-01
6210.675	1.10E-01	1.12E-01	1.14E-01	1.16E-01	1.18E-01	1.21E-01



APPENDIX B Dispersion Modelling

6210.625 1.11E-01 1.13E-01 1.15E-01 1.16E-01 1.19E-01 1.21E-01
6210.575 1.12E-01 1.14E-01 1.15E-01 1.17E-01 1.20E-01 1.22E-01
6210.525 1.12E-01 1.15E-01 1.17E-01 1.18E-01 1.21E-01 1.23E-01
6210.475 1.13E-01 1.15E-01 1.17E-01 1.19E-01 1.22E-01 1.24E-01
6210.425 1.14E-01 1.16E-01 1.18E-01 1.20E-01 1.23E-01 1.25E-01
6210.375 1.16E-01 1.18E-01 1.20E-01 1.22E-01 1.24E-01 1.26E-01
6210.325 1.18E-01 1.20E-01 1.22E-01 1.24E-01 1.26E-01 1.28E-01
6210.275 1.20E-01 1.22E-01 1.24E-01 1.26E-01 1.28E-01 1.31E-01
6210.225 1.22E-01 1.24E-01 1.26E-01 1.29E-01 1.31E-01 1.33E-01
6210.175 1.24E-01 1.26E-01 1.28E-01 1.31E-01 1.33E-01 1.35E-01
6210.125 1.25E-01 1.28E-01 1.30E-01 1.32E-01 1.35E-01 1.37E-01
6210.075 1.26E-01 1.29E-01 1.31E-01 1.34E-01 1.36E-01 1.39E-01
6210.025 1.28E-01 1.30E-01 1.32E-01 1.35E-01 1.37E-01 1.40E-01
6209.975 1.29E-01 1.31E-01 1.34E-01 1.36E-01 1.39E-01 1.41E-01
6209.925 1.31E-01 1.33E-01 1.35E-01 1.38E-01 1.41E-01 1.43E-01
6209.875 1.32E-01 1.34E-01 1.37E-01 1.39E-01 1.42E-01 1.45E-01
6209.825 1.32E-01 1.34E-01 1.37E-01 1.40E-01 1.43E-01 1.45E-01
6209.775 1.32E-01 1.34E-01 1.37E-01 1.40E-01 1.42E-01 1.45E-01
6209.725 1.32E-01 1.35E-01 1.37E-01 1.40E-01 1.43E-01 1.45E-01
6209.675 1.32E-01 1.34E-01 1.37E-01 1.39E-01 1.42E-01 1.45E-01
6209.625 1.30E-01 1.33E-01 1.35E-01 1.38E-01 1.40E-01 1.43E-01
6209.575 1.28E-01 1.30E-01 1.33E-01 1.35E-01 1.38E-01 1.40E-01
6209.525 1.25E-01 1.27E-01 1.29E-01 1.32E-01 1.34E-01 1.37E-01
6209.475 1.22E-01 1.24E-01 1.26E-01 1.29E-01 1.31E-01 1.33E-01
6209.425 1.19E-01 1.21E-01 1.24E-01 1.26E-01 1.28E-01 1.31E-01
6209.375 1.17E-01 1.19E-01 1.22E-01 1.24E-01 1.27E-01 1.29E-01
6209.325 1.16E-01 1.18E-01 1.21E-01 1.23E-01 1.26E-01 1.28E-01
6209.275 1.16E-01 1.18E-01 1.20E-01 1.23E-01 1.25E-01 1.28E-01
6209.225 1.16E-01 1.18E-01 1.20E-01 1.23E-01 1.25E-01 1.28E-01
6209.175 1.16E-01 1.18E-01 1.21E-01 1.23E-01 1.25E-01 1.28E-01
6209.125 1.17E-01 1.19E-01 1.21E-01 1.24E-01 1.26E-01 1.29E-01
6209.075 1.17E-01 1.19E-01 1.22E-01 1.24E-01 1.26E-01 1.29E-01
6209.025 1.17E-01 1.20E-01 1.22E-01 1.24E-01 1.27E-01 1.29E-01
6208.975 1.17E-01 1.20E-01 1.22E-01 1.24E-01 1.27E-01 1.29E-01
6208.925 1.17E-01 1.20E-01 1.22E-01 1.25E-01 1.27E-01 1.30E-01
6208.875 1.18E-01 1.20E-01 1.23E-01 1.25E-01 1.28E-01 1.31E-01
6208.825 1.18E-01 1.21E-01 1.24E-01 1.27E-01 1.30E-01 1.33E-01
6208.775 1.20E-01 1.23E-01 1.26E-01 1.29E-01 1.32E-01 1.36E-01
6208.725 1.22E-01 1.25E-01 1.28E-01 1.32E-01 1.35E-01 1.39E-01
6208.675 1.24E-01 1.28E-01 1.31E-01 1.34E-01 1.38E-01 1.41E-01
6208.625 1.27E-01 1.30E-01 1.33E-01 1.37E-01 1.40E-01 1.42E-01
6208.575 1.29E-01 1.32E-01 1.35E-01 1.38E-01 1.40E-01 1.42E-01
6208.525 1.30E-01 1.33E-01 1.35E-01 1.37E-01 1.39E-01 1.41E-01
6208.475 1.30E-01 1.32E-01 1.34E-01 1.36E-01 1.38E-01 1.40E-01
6208.425 1.29E-01 1.31E-01 1.32E-01 1.34E-01 1.36E-01 1.37E-01
6208.375 1.27E-01 1.29E-01 1.30E-01 1.32E-01 1.33E-01 1.34E-01
6208.325 1.25E-01 1.27E-01 1.28E-01 1.29E-01 1.30E-01 1.31E-01
6208.275 1.23E-01 1.24E-01 1.25E-01 1.26E-01 1.27E-01 1.28E-01
6208.225 1.20E-01 1.21E-01 1.22E-01 1.23E-01 1.24E-01 1.25E-01
6208.175 1.17E-01 1.18E-01 1.19E-01 1.21E-01 1.22E-01 1.23E-01
6208.125 1.15E-01 1.16E-01 1.17E-01 1.19E-01 1.20E-01 1.22E-01
6208.075 1.13E-01 1.14E-01 1.16E-01 1.17E-01 1.19E-01 1.21E-01
6208.025 1.11E-01 1.13E-01 1.14E-01 1.16E-01 1.18E-01 1.19E-01
6207.975 1.10E-01 1.12E-01 1.14E-01 1.15E-01 1.17E-01 1.18E-01
6207.925 1.10E-01 1.11E-01 1.13E-01 1.14E-01 1.15E-01 1.16E-01
6207.875 1.09E-01 1.10E-01 1.11E-01 1.12E-01 1.13E-01 1.14E-01
6207.825 1.07E-01 1.08E-01 1.09E-01 1.10E-01 1.11E-01 1.11E-01
6207.775 1.06E-01 1.07E-01 1.07E-01 1.08E-01 1.08E-01 1.08E-01
6207.725 1.04E-01 1.04E-01 1.05E-01 1.05E-01 1.05E-01 1.06E-01
6207.675 1.02E-01 1.02E-01 1.02E-01 1.02E-01 1.03E-01 1.03E-01
6207.625 9.93E-02 9.95E-02 9.98E-02 1.00E-01 1.01E-01 1.01E-01
6207.575 9.69E-02 9.73E-02 9.77E-02 9.82E-02 9.89E-02 9.97E-02
6207.525 9.47E-02 9.52E-02 9.59E-02 9.67E-02 9.75E-02 9.86E-02
6207.475 9.29E-02 9.36E-02 9.44E-02 9.54E-02 9.65E-02 9.76E-02
6207.425 9.14E-02 9.24E-02 9.33E-02 9.44E-02 9.54E-02 9.66E-02
6207.375 9.03E-02 9.15E-02 9.26E-02 9.36E-02 9.46E-02 9.55E-02

X (km): 613.575 613.625 613.675 613.725 613.775 613.825

Y (km)



APPENDIX B Dispersion Modelling

6212.375	1.16E-01	1.19E-01	1.21E-01	1.23E-01	1.27E-01	1.29E-01
6212.325	1.17E-01	1.19E-01	1.21E-01	1.24E-01	1.26E-01	1.30E-01
6212.275	1.18E-01	1.20E-01	1.22E-01	1.24E-01	1.27E-01	1.29E-01
6212.225	1.19E-01	1.20E-01	1.22E-01	1.25E-01	1.27E-01	1.30E-01
6212.175	1.20E-01	1.22E-01	1.23E-01	1.25E-01	1.28E-01	1.30E-01
6212.125	1.22E-01	1.23E-01	1.24E-01	1.26E-01	1.28E-01	1.31E-01
6212.075	1.23E-01	1.25E-01	1.26E-01	1.27E-01	1.30E-01	1.31E-01
6212.025	1.25E-01	1.26E-01	1.27E-01	1.29E-01	1.30E-01	1.33E-01
6211.975	1.26E-01	1.28E-01	1.29E-01	1.31E-01	1.32E-01	1.34E-01
6211.925	1.27E-01	1.29E-01	1.31E-01	1.32E-01	1.34E-01	1.35E-01
6211.875	1.28E-01	1.30E-01	1.32E-01	1.34E-01	1.36E-01	1.38E-01
6211.825	1.29E-01	1.32E-01	1.33E-01	1.36E-01	1.38E-01	1.39E-01
6211.775	1.31E-01	1.32E-01	1.35E-01	1.36E-01	1.39E-01	1.41E-01
6211.725	1.32E-01	1.34E-01	1.36E-01	1.38E-01	1.40E-01	1.43E-01
6211.675	1.34E-01	1.36E-01	1.37E-01	1.39E-01	1.41E-01	1.43E-01
6211.625	1.36E-01	1.38E-01	1.39E-01	1.41E-01	1.43E-01	1.45E-01
6211.575	1.38E-01	1.39E-01	1.41E-01	1.43E-01	1.44E-01	1.47E-01
6211.525	1.38E-01	1.41E-01	1.43E-01	1.45E-01	1.47E-01	1.48E-01
6211.475	1.39E-01	1.41E-01	1.44E-01	1.46E-01	1.48E-01	1.50E-01
6211.425	1.38E-01	1.41E-01	1.44E-01	1.47E-01	1.50E-01	1.53E-01
6211.375	1.38E-01	1.41E-01	1.44E-01	1.48E-01	1.51E-01	1.53E-01
6211.325	1.37E-01	1.41E-01	1.44E-01	1.47E-01	1.51E-01	1.54E-01
6211.275	1.38E-01	1.40E-01	1.44E-01	1.47E-01	1.50E-01	1.54E-01
6211.225	1.37E-01	1.40E-01	1.43E-01	1.47E-01	1.50E-01	1.54E-01
6211.175	1.37E-01	1.40E-01	1.43E-01	1.47E-01	1.50E-01	1.53E-01
6211.125	1.36E-01	1.40E-01	1.43E-01	1.46E-01	1.49E-01	1.53E-01
6211.075	1.35E-01	1.38E-01	1.42E-01	1.46E-01	1.49E-01	1.53E-01
6211.025	1.33E-01	1.37E-01	1.41E-01	1.44E-01	1.48E-01	1.52E-01
6210.975	1.31E-01	1.35E-01	1.39E-01	1.43E-01	1.47E-01	1.50E-01
6210.925	1.29E-01	1.33E-01	1.37E-01	1.40E-01	1.45E-01	1.49E-01
6210.875	1.28E-01	1.31E-01	1.35E-01	1.38E-01	1.42E-01	1.46E-01
6210.825	1.26E-01	1.30E-01	1.33E-01	1.37E-01	1.40E-01	1.44E-01
6210.775	1.25E-01	1.29E-01	1.32E-01	1.36E-01	1.39E-01	1.42E-01
6210.725	1.25E-01	1.28E-01	1.31E-01	1.34E-01	1.38E-01	1.42E-01
6210.675	1.24E-01	1.27E-01	1.30E-01	1.33E-01	1.37E-01	1.41E-01
6210.625	1.24E-01	1.27E-01	1.30E-01	1.33E-01	1.36E-01	1.40E-01
6210.575	1.24E-01	1.27E-01	1.30E-01	1.33E-01	1.36E-01	1.40E-01
6210.525	1.25E-01	1.27E-01	1.30E-01	1.33E-01	1.36E-01	1.39E-01
6210.475	1.26E-01	1.29E-01	1.31E-01	1.34E-01	1.37E-01	1.39E-01
6210.425	1.27E-01	1.30E-01	1.33E-01	1.35E-01	1.38E-01	1.40E-01
6210.375	1.29E-01	1.31E-01	1.34E-01	1.37E-01	1.40E-01	1.42E-01
6210.325	1.31E-01	1.33E-01	1.36E-01	1.38E-01	1.41E-01	1.44E-01
6210.275	1.33E-01	1.35E-01	1.38E-01	1.40E-01	1.43E-01	1.46E-01
6210.225	1.35E-01	1.38E-01	1.41E-01	1.43E-01	1.46E-01	1.49E-01
6210.175	1.38E-01	1.41E-01	1.43E-01	1.46E-01	1.49E-01	1.52E-01
6210.125	1.40E-01	1.42E-01	1.45E-01	1.48E-01	1.51E-01	1.54E-01
6210.075	1.41E-01	1.44E-01	1.47E-01	1.50E-01	1.53E-01	1.56E-01
6210.025	1.42E-01	1.45E-01	1.48E-01	1.51E-01	1.54E-01	1.57E-01
6209.975	1.44E-01	1.47E-01	1.50E-01	1.53E-01	1.56E-01	1.59E-01
6209.925	1.46E-01	1.49E-01	1.52E-01	1.55E-01	1.58E-01	1.61E-01
6209.875	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.60E-01	1.63E-01
6209.825	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.60E-01	1.64E-01
6209.775	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.60E-01	1.64E-01
6209.725	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.60E-01	1.64E-01
6209.675	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.60E-01	1.63E-01
6209.625	1.46E-01	1.49E-01	1.52E-01	1.55E-01	1.58E-01	1.61E-01
6209.575	1.43E-01	1.46E-01	1.49E-01	1.52E-01	1.55E-01	1.58E-01
6209.525	1.39E-01	1.42E-01	1.45E-01	1.48E-01	1.51E-01	1.54E-01
6209.475	1.36E-01	1.38E-01	1.41E-01	1.44E-01	1.47E-01	1.50E-01
6209.425	1.33E-01	1.36E-01	1.38E-01	1.41E-01	1.44E-01	1.48E-01
6209.375	1.32E-01	1.34E-01	1.37E-01	1.40E-01	1.43E-01	1.46E-01
6209.325	1.31E-01	1.33E-01	1.36E-01	1.39E-01	1.42E-01	1.45E-01
6209.275	1.30E-01	1.33E-01	1.36E-01	1.39E-01	1.42E-01	1.45E-01
6209.225	1.30E-01	1.33E-01	1.36E-01	1.39E-01	1.42E-01	1.46E-01
6209.175	1.31E-01	1.34E-01	1.37E-01	1.39E-01	1.43E-01	1.46E-01
6209.125	1.31E-01	1.34E-01	1.37E-01	1.40E-01	1.43E-01	1.46E-01
6209.075	1.32E-01	1.34E-01	1.37E-01	1.40E-01	1.43E-01	1.47E-01
6209.025	1.32E-01	1.35E-01	1.37E-01	1.40E-01	1.44E-01	1.47E-01
6208.975	1.32E-01	1.35E-01	1.38E-01	1.41E-01	1.45E-01	1.49E-01
6208.925	1.33E-01	1.36E-01	1.39E-01	1.43E-01	1.47E-01	1.51E-01
6208.875	1.34E-01	1.38E-01	1.41E-01	1.45E-01	1.50E-01	1.54E-01



APPENDIX B Dispersion Modelling

6208.825	1.37E-01	1.40E-01	1.44E-01	1.49E-01	1.53E-01	1.57E-01
6208.775	1.39E-01	1.43E-01	1.47E-01	1.51E-01	1.55E-01	1.59E-01
6208.725	1.42E-01	1.46E-01	1.50E-01	1.53E-01	1.57E-01	1.60E-01
6208.675	1.45E-01	1.48E-01	1.51E-01	1.54E-01	1.56E-01	1.59E-01
6208.625	1.45E-01	1.48E-01	1.50E-01	1.53E-01	1.55E-01	1.57E-01
6208.575	1.45E-01	1.47E-01	1.49E-01	1.51E-01	1.53E-01	1.55E-01
6208.525	1.43E-01	1.45E-01	1.47E-01	1.49E-01	1.50E-01	1.52E-01
6208.475	1.41E-01	1.43E-01	1.44E-01	1.46E-01	1.47E-01	1.49E-01
6208.425	1.39E-01	1.40E-01	1.41E-01	1.42E-01	1.44E-01	1.45E-01
6208.375	1.35E-01	1.37E-01	1.38E-01	1.39E-01	1.41E-01	1.42E-01
6208.325	1.32E-01	1.33E-01	1.35E-01	1.36E-01	1.38E-01	1.39E-01
6208.275	1.29E-01	1.31E-01	1.32E-01	1.34E-01	1.35E-01	1.37E-01
6208.225	1.27E-01	1.28E-01	1.30E-01	1.32E-01	1.33E-01	1.35E-01
6208.175	1.25E-01	1.26E-01	1.28E-01	1.30E-01	1.32E-01	1.33E-01
6208.125	1.23E-01	1.25E-01	1.27E-01	1.28E-01	1.30E-01	1.31E-01
6208.075	1.22E-01	1.24E-01	1.25E-01	1.26E-01	1.27E-01	1.28E-01
6208.025	1.21E-01	1.22E-01	1.23E-01	1.24E-01	1.25E-01	1.25E-01
6207.975	1.19E-01	1.20E-01	1.21E-01	1.21E-01	1.21E-01	1.22E-01
6207.925	1.17E-01	1.17E-01	1.18E-01	1.18E-01	1.18E-01	1.19E-01
6207.875	1.14E-01	1.14E-01	1.14E-01	1.15E-01	1.16E-01	1.17E-01
6207.825	1.11E-01	1.11E-01	1.12E-01	1.13E-01	1.14E-01	1.15E-01
6207.775	1.08E-01	1.09E-01	1.10E-01	1.10E-01	1.12E-01	1.13E-01
6207.725	1.06E-01	1.07E-01	1.08E-01	1.09E-01	1.10E-01	1.12E-01
6207.675	1.04E-01	1.05E-01	1.06E-01	1.07E-01	1.09E-01	1.10E-01
6207.625	1.02E-01	1.03E-01	1.05E-01	1.06E-01	1.07E-01	1.08E-01
6207.575	1.01E-01	1.02E-01	1.03E-01	1.04E-01	1.05E-01	1.06E-01
6207.525	9.97E-02	1.01E-01	1.02E-01	1.03E-01	1.04E-01	1.04E-01
6207.475	9.86E-02	9.96E-02	1.01E-01	1.01E-01	1.02E-01	1.03E-01
6207.425	9.75E-02	9.83E-02	9.92E-02	1.00E-01	1.00E-01	1.01E-01
6207.375	9.64E-02	9.73E-02	9.81E-02	9.86E-02	9.91E-02	9.93E-02

X (km): 613.875 613.925 613.975 614.025 614.075 614.125

Y (km)

6212.375	1.33E-01	1.37E-01	1.40E-01	1.44E-01	1.48E-01	1.52E-01
6212.325	1.32E-01	1.36E-01	1.40E-01	1.43E-01	1.48E-01	1.52E-01
6212.275	1.33E-01	1.36E-01	1.40E-01	1.44E-01	1.48E-01	1.52E-01
6212.225	1.33E-01	1.36E-01	1.40E-01	1.44E-01	1.48E-01	1.52E-01
6212.175	1.33E-01	1.36E-01	1.40E-01	1.43E-01	1.47E-01	1.52E-01
6212.125	1.34E-01	1.37E-01	1.40E-01	1.43E-01	1.47E-01	1.51E-01
6212.075	1.34E-01	1.37E-01	1.40E-01	1.43E-01	1.47E-01	1.51E-01
6212.025	1.35E-01	1.38E-01	1.41E-01	1.44E-01	1.47E-01	1.52E-01
6211.975	1.36E-01	1.38E-01	1.41E-01	1.44E-01	1.48E-01	1.51E-01
6211.925	1.37E-01	1.40E-01	1.42E-01	1.45E-01	1.48E-01	1.52E-01
6211.875	1.39E-01	1.41E-01	1.43E-01	1.45E-01	1.49E-01	1.52E-01
6211.825	1.41E-01	1.42E-01	1.45E-01	1.47E-01	1.49E-01	1.53E-01
6211.775	1.43E-01	1.45E-01	1.46E-01	1.49E-01	1.51E-01	1.54E-01
6211.725	1.45E-01	1.47E-01	1.49E-01	1.50E-01	1.53E-01	1.55E-01
6211.675	1.46E-01	1.48E-01	1.51E-01	1.53E-01	1.54E-01	1.57E-01
6211.625	1.47E-01	1.50E-01	1.52E-01	1.55E-01	1.57E-01	1.60E-01
6211.575	1.48E-01	1.51E-01	1.54E-01	1.57E-01	1.59E-01	1.62E-01
6211.525	1.50E-01	1.52E-01	1.55E-01	1.58E-01	1.61E-01	1.64E-01
6211.475	1.52E-01	1.55E-01	1.57E-01	1.59E-01	1.63E-01	1.66E-01
6211.425	1.54E-01	1.57E-01	1.59E-01	1.61E-01	1.64E-01	1.68E-01
6211.375	1.56E-01	1.58E-01	1.61E-01	1.63E-01	1.66E-01	1.69E-01
6211.325	1.57E-01	1.60E-01	1.63E-01	1.66E-01	1.68E-01	1.71E-01
6211.275	1.58E-01	1.61E-01	1.64E-01	1.67E-01	1.70E-01	1.73E-01
6211.225	1.57E-01	1.61E-01	1.64E-01	1.68E-01	1.72E-01	1.75E-01
6211.175	1.57E-01	1.61E-01	1.65E-01	1.69E-01	1.73E-01	1.76E-01
6211.125	1.56E-01	1.60E-01	1.64E-01	1.68E-01	1.73E-01	1.77E-01
6211.075	1.56E-01	1.60E-01	1.64E-01	1.68E-01	1.72E-01	1.76E-01
6211.025	1.56E-01	1.59E-01	1.64E-01	1.67E-01	1.72E-01	1.76E-01
6210.975	1.55E-01	1.59E-01	1.63E-01	1.67E-01	1.71E-01	1.76E-01
6210.925	1.53E-01	1.57E-01	1.62E-01	1.67E-01	1.71E-01	1.76E-01
6210.875	1.51E-01	1.55E-01	1.60E-01	1.65E-01	1.70E-01	1.75E-01
6210.825	1.48E-01	1.53E-01	1.58E-01	1.63E-01	1.68E-01	1.74E-01
6210.775	1.46E-01	1.51E-01	1.55E-01	1.61E-01	1.66E-01	1.72E-01
6210.725	1.45E-01	1.49E-01	1.54E-01	1.59E-01	1.64E-01	1.70E-01
6210.675	1.45E-01	1.49E-01	1.53E-01	1.58E-01	1.63E-01	1.68E-01
6210.625	1.44E-01	1.48E-01	1.53E-01	1.57E-01	1.62E-01	1.67E-01



APPENDIX B Dispersion Modelling

6210.575	1.43E-01	1.47E-01	1.52E-01	1.56E-01	1.62E-01	1.66E-01
6210.525	1.43E-01	1.47E-01	1.51E-01	1.56E-01	1.61E-01	1.66E-01
6210.475	1.43E-01	1.46E-01	1.51E-01	1.55E-01	1.59E-01	1.64E-01
6210.425	1.44E-01	1.47E-01	1.50E-01	1.54E-01	1.59E-01	1.63E-01
6210.375	1.45E-01	1.48E-01	1.51E-01	1.55E-01	1.59E-01	1.63E-01
6210.325	1.47E-01	1.50E-01	1.53E-01	1.57E-01	1.60E-01	1.64E-01
6210.275	1.49E-01	1.52E-01	1.55E-01	1.59E-01	1.63E-01	1.66E-01
6210.225	1.52E-01	1.55E-01	1.57E-01	1.61E-01	1.65E-01	1.68E-01
6210.175	1.55E-01	1.58E-01	1.61E-01	1.64E-01	1.67E-01	1.71E-01
6210.125	1.58E-01	1.60E-01	1.63E-01	1.67E-01	1.70E-01	1.74E-01
6210.075	1.59E-01	1.62E-01	1.66E-01	1.69E-01	1.73E-01	1.77E-01
6210.025	1.60E-01	1.64E-01	1.67E-01	1.71E-01	1.75E-01	1.79E-01
6209.975	1.62E-01	1.66E-01	1.69E-01	1.73E-01	1.77E-01	1.81E-01
6209.925	1.65E-01	1.68E-01	1.71E-01	1.75E-01	1.79E-01	1.84E-01
6209.875	1.67E-01	1.70E-01	1.74E-01	1.77E-01	1.82E-01	1.86E-01
6209.825	1.68E-01	1.71E-01	1.75E-01	1.79E-01	1.83E-01	1.87E-01
6209.775	1.68E-01	1.71E-01	1.76E-01	1.79E-01	1.83E-01	1.88E-01
6209.725	1.67E-01	1.71E-01	1.75E-01	1.80E-01	1.84E-01	1.88E-01
6209.675	1.67E-01	1.71E-01	1.75E-01	1.80E-01	1.84E-01	1.88E-01
6209.625	1.65E-01	1.69E-01	1.73E-01	1.77E-01	1.82E-01	1.86E-01
6209.575	1.61E-01	1.65E-01	1.68E-01	1.73E-01	1.77E-01	1.82E-01
6209.525	1.57E-01	1.60E-01	1.64E-01	1.68E-01	1.72E-01	1.77E-01
6209.475	1.53E-01	1.57E-01	1.60E-01	1.64E-01	1.68E-01	1.72E-01
6209.425	1.51E-01	1.54E-01	1.58E-01	1.61E-01	1.66E-01	1.70E-01
6209.375	1.50E-01	1.53E-01	1.57E-01	1.60E-01	1.65E-01	1.69E-01
6209.325	1.49E-01	1.52E-01	1.56E-01	1.60E-01	1.64E-01	1.69E-01
6209.275	1.49E-01	1.52E-01	1.56E-01	1.60E-01	1.64E-01	1.69E-01
6209.225	1.49E-01	1.53E-01	1.57E-01	1.61E-01	1.65E-01	1.69E-01
6209.175	1.50E-01	1.53E-01	1.57E-01	1.61E-01	1.66E-01	1.70E-01
6209.125	1.50E-01	1.54E-01	1.58E-01	1.62E-01	1.66E-01	1.70E-01
6209.075	1.50E-01	1.54E-01	1.58E-01	1.62E-01	1.67E-01	1.72E-01
6209.025	1.51E-01	1.55E-01	1.59E-01	1.64E-01	1.69E-01	1.75E-01
6208.975	1.53E-01	1.57E-01	1.62E-01	1.67E-01	1.73E-01	1.78E-01
6208.925	1.56E-01	1.60E-01	1.65E-01	1.70E-01	1.76E-01	1.81E-01
6208.875	1.59E-01	1.63E-01	1.68E-01	1.73E-01	1.78E-01	1.83E-01
6208.825	1.62E-01	1.66E-01	1.70E-01	1.74E-01	1.78E-01	1.83E-01
6208.775	1.63E-01	1.67E-01	1.70E-01	1.74E-01	1.78E-01	1.81E-01
6208.725	1.63E-01	1.66E-01	1.69E-01	1.72E-01	1.75E-01	1.79E-01
6208.675	1.62E-01	1.65E-01	1.67E-01	1.70E-01	1.73E-01	1.76E-01
6208.625	1.60E-01	1.62E-01	1.65E-01	1.67E-01	1.69E-01	1.72E-01
6208.575	1.57E-01	1.59E-01	1.61E-01	1.63E-01	1.65E-01	1.68E-01
6208.525	1.54E-01	1.56E-01	1.57E-01	1.59E-01	1.61E-01	1.64E-01
6208.475	1.50E-01	1.52E-01	1.54E-01	1.56E-01	1.58E-01	1.60E-01
6208.425	1.47E-01	1.48E-01	1.51E-01	1.53E-01	1.55E-01	1.58E-01
6208.375	1.44E-01	1.46E-01	1.48E-01	1.50E-01	1.53E-01	1.55E-01
6208.325	1.41E-01	1.43E-01	1.46E-01	1.48E-01	1.50E-01	1.52E-01
6208.275	1.39E-01	1.41E-01	1.43E-01	1.45E-01	1.47E-01	1.48E-01
6208.225	1.37E-01	1.39E-01	1.41E-01	1.42E-01	1.43E-01	1.44E-01
6208.175	1.35E-01	1.37E-01	1.38E-01	1.39E-01	1.39E-01	1.40E-01
6208.125	1.32E-01	1.33E-01	1.34E-01	1.35E-01	1.35E-01	1.36E-01
6208.075	1.29E-01	1.30E-01	1.30E-01	1.31E-01	1.32E-01	1.34E-01
6208.025	1.26E-01	1.26E-01	1.27E-01	1.28E-01	1.30E-01	1.32E-01
6207.975	1.23E-01	1.24E-01	1.25E-01	1.27E-01	1.28E-01	1.31E-01
6207.925	1.20E-01	1.21E-01	1.23E-01	1.25E-01	1.27E-01	1.29E-01
6207.875	1.18E-01	1.20E-01	1.21E-01	1.23E-01	1.25E-01	1.26E-01
6207.825	1.16E-01	1.18E-01	1.20E-01	1.21E-01	1.22E-01	1.24E-01
6207.775	1.15E-01	1.16E-01	1.17E-01	1.18E-01	1.19E-01	1.21E-01
6207.725	1.13E-01	1.14E-01	1.15E-01	1.16E-01	1.17E-01	1.17E-01
6207.675	1.11E-01	1.12E-01	1.13E-01	1.14E-01	1.14E-01	1.14E-01
6207.625	1.09E-01	1.10E-01	1.11E-01	1.12E-01	1.12E-01	1.12E-01
6207.575	1.08E-01	1.08E-01	1.09E-01	1.10E-01	1.10E-01	1.09E-01
6207.525	1.05E-01	1.06E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
6207.475	1.03E-01	1.03E-01	1.04E-01	1.04E-01	1.04E-01	1.03E-01
6207.425	1.01E-01	1.01E-01	1.01E-01	1.01E-01	1.01E-01	1.00E-01
6207.375	9.93E-02	9.91E-02	9.83E-02	9.71E-02	9.61E-02	9.56E-02

X (km): 614.175 614.225 614.275 614.325 614.375 614.425

Y (km)

6212.375 1.56E-01 1.59E-01 1.63E-01 1.66E-01 1.69E-01 1.71E-01



APPENDIX B Dispersion Modelling

6212.325	1.56E-01	1.60E-01	1.63E-01	1.67E-01	1.70E-01	1.73E-01
6212.275	1.56E-01	1.60E-01	1.64E-01	1.68E-01	1.72E-01	1.75E-01
6212.225	1.56E-01	1.61E-01	1.65E-01	1.69E-01	1.72E-01	1.76E-01
6212.175	1.56E-01	1.61E-01	1.65E-01	1.69E-01	1.73E-01	1.78E-01
6212.125	1.56E-01	1.60E-01	1.65E-01	1.70E-01	1.74E-01	1.78E-01
6212.075	1.56E-01	1.60E-01	1.65E-01	1.70E-01	1.75E-01	1.80E-01
6212.025	1.55E-01	1.60E-01	1.65E-01	1.70E-01	1.75E-01	1.80E-01
6211.975	1.56E-01	1.60E-01	1.65E-01	1.70E-01	1.76E-01	1.80E-01
6211.925	1.55E-01	1.60E-01	1.65E-01	1.70E-01	1.75E-01	1.81E-01
6211.875	1.56E-01	1.60E-01	1.65E-01	1.70E-01	1.75E-01	1.80E-01
6211.825	1.57E-01	1.61E-01	1.65E-01	1.69E-01	1.75E-01	1.81E-01
6211.775	1.57E-01	1.61E-01	1.66E-01	1.70E-01	1.75E-01	1.81E-01
6211.725	1.58E-01	1.62E-01	1.66E-01	1.71E-01	1.75E-01	1.80E-01
6211.675	1.60E-01	1.63E-01	1.67E-01	1.71E-01	1.76E-01	1.81E-01
6211.625	1.62E-01	1.65E-01	1.68E-01	1.72E-01	1.76E-01	1.81E-01
6211.575	1.64E-01	1.66E-01	1.70E-01	1.74E-01	1.78E-01	1.82E-01
6211.525	1.66E-01	1.69E-01	1.72E-01	1.75E-01	1.79E-01	1.84E-01
6211.475	1.69E-01	1.72E-01	1.75E-01	1.77E-01	1.81E-01	1.85E-01
6211.425	1.71E-01	1.74E-01	1.77E-01	1.80E-01	1.83E-01	1.87E-01
6211.375	1.72E-01	1.76E-01	1.79E-01	1.83E-01	1.86E-01	1.89E-01
6211.325	1.74E-01	1.77E-01	1.81E-01	1.85E-01	1.89E-01	1.92E-01
6211.275	1.76E-01	1.79E-01	1.83E-01	1.87E-01	1.91E-01	1.95E-01
6211.225	1.78E-01	1.81E-01	1.85E-01	1.88E-01	1.93E-01	1.98E-01
6211.175	1.80E-01	1.83E-01	1.87E-01	1.90E-01	1.95E-01	2.00E-01
6211.125	1.81E-01	1.85E-01	1.89E-01	1.93E-01	1.97E-01	2.01E-01
6211.075	1.81E-01	1.86E-01	1.91E-01	1.95E-01	1.99E-01	2.03E-01
6211.025	1.81E-01	1.86E-01	1.91E-01	1.96E-01	2.01E-01	2.05E-01
6210.975	1.81E-01	1.85E-01	1.91E-01	1.97E-01	2.02E-01	2.07E-01
6210.925	1.81E-01	1.85E-01	1.91E-01	1.97E-01	2.03E-01	2.08E-01
6210.875	1.80E-01	1.85E-01	1.91E-01	1.97E-01	2.02E-01	2.08E-01
6210.825	1.79E-01	1.84E-01	1.90E-01	1.96E-01	2.02E-01	2.08E-01
6210.775	1.77E-01	1.83E-01	1.89E-01	1.95E-01	2.02E-01	2.08E-01
6210.725	1.75E-01	1.81E-01	1.87E-01	1.93E-01	2.00E-01	2.08E-01
6210.675	1.72E-01	1.78E-01	1.84E-01	1.91E-01	1.98E-01	2.06E-01
6210.625	1.71E-01	1.76E-01	1.83E-01	1.88E-01	1.95E-01	2.02E-01
6210.575	1.71E-01	1.76E-01	1.81E-01	1.87E-01	1.93E-01	1.99E-01
6210.525	1.71E-01	1.76E-01	1.82E-01	1.87E-01	1.92E-01	1.98E-01
6210.475	1.70E-01	1.75E-01	1.81E-01	1.87E-01	1.93E-01	1.99E-01
6210.425	1.68E-01	1.74E-01	1.80E-01	1.86E-01	1.92E-01	1.99E-01
6210.375	1.67E-01	1.73E-01	1.78E-01	1.84E-01	1.90E-01	1.97E-01
6210.325	1.68E-01	1.72E-01	1.77E-01	1.82E-01	1.88E-01	1.94E-01
6210.275	1.70E-01	1.74E-01	1.78E-01	1.82E-01	1.87E-01	1.92E-01
6210.225	1.72E-01	1.76E-01	1.81E-01	1.85E-01	1.89E-01	1.94E-01
6210.175	1.75E-01	1.79E-01	1.84E-01	1.89E-01	1.93E-01	1.99E-01
6210.125	1.78E-01	1.82E-01	1.87E-01	1.92E-01	1.97E-01	2.03E-01
6210.075	1.81E-01	1.86E-01	1.90E-01	1.95E-01	2.01E-01	2.08E-01
6210.025	1.84E-01	1.88E-01	1.93E-01	1.98E-01	2.04E-01	2.10E-01
6209.975	1.86E-01	1.90E-01	1.95E-01	2.01E-01	2.06E-01	2.12E-01
6209.925	1.88E-01	1.93E-01	1.98E-01	2.03E-01	2.09E-01	2.15E-01
6209.875	1.91E-01	1.95E-01	2.00E-01	2.06E-01	2.12E-01	2.18E-01
6209.825	1.92E-01	1.97E-01	2.02E-01	2.08E-01	2.14E-01	2.20E-01
6209.775	1.92E-01	1.97E-01	2.03E-01	2.08E-01	2.14E-01	2.20E-01
6209.725	1.93E-01	1.98E-01	2.03E-01	2.08E-01	2.14E-01	2.21E-01
6209.675	1.93E-01	1.98E-01	2.03E-01	2.08E-01	2.14E-01	2.20E-01
6209.625	1.91E-01	1.95E-01	2.01E-01	2.06E-01	2.12E-01	2.18E-01
6209.575	1.86E-01	1.91E-01	1.95E-01	2.01E-01	2.06E-01	2.13E-01
6209.525	1.81E-01	1.86E-01	1.91E-01	1.96E-01	2.02E-01	2.08E-01
6209.475	1.77E-01	1.82E-01	1.88E-01	1.93E-01	1.98E-01	2.04E-01
6209.425	1.75E-01	1.80E-01	1.86E-01	1.91E-01	1.96E-01	2.02E-01
6209.375	1.74E-01	1.79E-01	1.84E-01	1.89E-01	1.95E-01	2.00E-01
6209.325	1.73E-01	1.78E-01	1.83E-01	1.88E-01	1.94E-01	1.99E-01
6209.275	1.74E-01	1.78E-01	1.83E-01	1.88E-01	1.94E-01	2.00E-01
6209.225	1.74E-01	1.79E-01	1.84E-01	1.89E-01	1.95E-01	2.01E-01
6209.175	1.75E-01	1.79E-01	1.84E-01	1.90E-01	1.96E-01	2.03E-01
6209.125	1.75E-01	1.81E-01	1.86E-01	1.93E-01	2.00E-01	2.07E-01
6209.075	1.77E-01	1.83E-01	1.90E-01	1.97E-01	2.04E-01	2.12E-01
6209.025	1.81E-01	1.87E-01	1.94E-01	2.01E-01	2.08E-01	2.16E-01
6208.975	1.84E-01	1.90E-01	1.97E-01	2.03E-01	2.10E-01	2.16E-01
6208.925	1.87E-01	1.92E-01	1.98E-01	2.04E-01	2.09E-01	2.14E-01
6208.875	1.88E-01	1.92E-01	1.97E-01	2.02E-01	2.07E-01	2.11E-01
6208.825	1.87E-01	1.91E-01	1.95E-01	1.99E-01	2.04E-01	2.07E-01



APPENDIX B Dispersion Modelling

6208.775	1.85E-01	1.89E-01	1.92E-01	1.96E-01	1.99E-01	2.03E-01
6208.725	1.82E-01	1.85E-01	1.88E-01	1.92E-01	1.94E-01	1.97E-01
6208.675	1.78E-01	1.81E-01	1.84E-01	1.87E-01	1.89E-01	1.92E-01
6208.625	1.74E-01	1.77E-01	1.79E-01	1.82E-01	1.85E-01	1.88E-01
6208.575	1.70E-01	1.72E-01	1.75E-01	1.78E-01	1.81E-01	1.84E-01
6208.525	1.66E-01	1.69E-01	1.72E-01	1.74E-01	1.77E-01	1.80E-01
6208.475	1.63E-01	1.66E-01	1.68E-01	1.71E-01	1.73E-01	1.75E-01
6208.425	1.60E-01	1.63E-01	1.65E-01	1.67E-01	1.68E-01	1.70E-01
6208.375	1.57E-01	1.59E-01	1.61E-01	1.62E-01	1.63E-01	1.64E-01
6208.325	1.53E-01	1.55E-01	1.56E-01	1.57E-01	1.58E-01	1.59E-01
6208.275	1.49E-01	1.50E-01	1.51E-01	1.52E-01	1.54E-01	1.56E-01
6208.225	1.45E-01	1.46E-01	1.47E-01	1.49E-01	1.51E-01	1.54E-01
6208.175	1.41E-01	1.42E-01	1.44E-01	1.46E-01	1.49E-01	1.52E-01
6208.125	1.38E-01	1.40E-01	1.42E-01	1.44E-01	1.47E-01	1.49E-01
6208.075	1.36E-01	1.38E-01	1.40E-01	1.43E-01	1.45E-01	1.46E-01
6208.025	1.34E-01	1.37E-01	1.39E-01	1.40E-01	1.42E-01	1.43E-01
6207.975	1.33E-01	1.35E-01	1.36E-01	1.37E-01	1.38E-01	1.39E-01
6207.925	1.31E-01	1.32E-01	1.33E-01	1.34E-01	1.34E-01	1.35E-01
6207.875	1.28E-01	1.29E-01	1.30E-01	1.30E-01	1.30E-01	1.31E-01
6207.825	1.25E-01	1.26E-01	1.26E-01	1.26E-01	1.26E-01	1.27E-01
6207.775	1.22E-01	1.22E-01	1.23E-01	1.22E-01	1.22E-01	1.22E-01
6207.725	1.18E-01	1.19E-01	1.19E-01	1.18E-01	1.17E-01	1.18E-01
6207.675	1.15E-01	1.15E-01	1.15E-01	1.14E-01	1.13E-01	1.15E-01
6207.625	1.11E-01	1.11E-01	1.11E-01	1.10E-01	1.10E-01	1.12E-01
6207.575	1.09E-01	1.07E-01	1.06E-01	1.06E-01	1.07E-01	1.10E-01
6207.525	1.06E-01	1.04E-01	1.03E-01	1.03E-01	1.04E-01	1.06E-01
6207.475	1.03E-01	1.02E-01	1.01E-01	1.01E-01	1.01E-01	1.03E-01
6207.425	9.98E-02	9.94E-02	9.96E-02	9.95E-02	9.94E-02	1.01E-01
6207.375	9.56E-02	9.64E-02	9.72E-02	9.77E-02	9.84E-02	1.00E-01

X (km): 614.475 614.525 614.575 614.625 614.675 614.725

Y (km)

6212.375	1.73E-01	1.77E-01	1.79E-01	1.82E-01	1.84E-01	1.86E-01
6212.325	1.76E-01	1.79E-01	1.81E-01	1.84E-01	1.87E-01	1.89E-01
6212.275	1.78E-01	1.81E-01	1.84E-01	1.87E-01	1.89E-01	1.91E-01
6212.225	1.79E-01	1.83E-01	1.85E-01	1.89E-01	1.92E-01	1.95E-01
6212.175	1.81E-01	1.84E-01	1.88E-01	1.91E-01	1.94E-01	1.97E-01
6212.125	1.83E-01	1.87E-01	1.90E-01	1.93E-01	1.97E-01	2.00E-01
6212.075	1.83E-01	1.88E-01	1.92E-01	1.96E-01	1.99E-01	2.02E-01
6212.025	1.85E-01	1.90E-01	1.94E-01	1.97E-01	2.01E-01	2.05E-01
6211.975	1.85E-01	1.90E-01	1.96E-01	2.00E-01	2.04E-01	2.08E-01
6211.925	1.86E-01	1.91E-01	1.96E-01	2.01E-01	2.06E-01	2.11E-01
6211.875	1.86E-01	1.92E-01	1.98E-01	2.03E-01	2.08E-01	2.12E-01
6211.825	1.86E-01	1.92E-01	1.98E-01	2.04E-01	2.10E-01	2.15E-01
6211.775	1.87E-01	1.93E-01	1.99E-01	2.04E-01	2.11E-01	2.17E-01
6211.725	1.86E-01	1.93E-01	1.99E-01	2.06E-01	2.12E-01	2.19E-01
6211.675	1.87E-01	1.92E-01	1.99E-01	2.06E-01	2.13E-01	2.20E-01
6211.625	1.87E-01	1.93E-01	1.99E-01	2.07E-01	2.13E-01	2.20E-01
6211.575	1.87E-01	1.93E-01	2.00E-01	2.06E-01	2.14E-01	2.22E-01
6211.525	1.89E-01	1.94E-01	2.00E-01	2.07E-01	2.14E-01	2.22E-01
6211.475	1.90E-01	1.95E-01	2.01E-01	2.07E-01	2.14E-01	2.22E-01
6211.425	1.91E-01	1.96E-01	2.02E-01	2.09E-01	2.15E-01	2.23E-01
6211.375	1.93E-01	1.98E-01	2.03E-01	2.09E-01	2.16E-01	2.24E-01
6211.325	1.95E-01	2.00E-01	2.05E-01	2.11E-01	2.17E-01	2.24E-01
6211.275	1.99E-01	2.03E-01	2.07E-01	2.13E-01	2.19E-01	2.25E-01
6211.225	2.02E-01	2.06E-01	2.11E-01	2.15E-01	2.21E-01	2.27E-01
6211.175	2.04E-01	2.09E-01	2.14E-01	2.18E-01	2.24E-01	2.30E-01
6211.125	2.06E-01	2.12E-01	2.17E-01	2.22E-01	2.27E-01	2.32E-01
6211.075	2.08E-01	2.14E-01	2.19E-01	2.25E-01	2.30E-01	2.35E-01
6211.025	2.11E-01	2.15E-01	2.21E-01	2.27E-01	2.33E-01	2.39E-01
6210.975	2.12E-01	2.17E-01	2.23E-01	2.29E-01	2.35E-01	2.42E-01
6210.925	2.13E-01	2.19E-01	2.24E-01	2.30E-01	2.38E-01	2.45E-01
6210.875	2.14E-01	2.19E-01	2.25E-01	2.32E-01	2.40E-01	2.48E-01
6210.825	2.13E-01	2.19E-01	2.27E-01	2.34E-01	2.42E-01	2.50E-01
6210.775	2.15E-01	2.22E-01	2.30E-01	2.36E-01	2.44E-01	2.52E-01
6210.725	2.16E-01	2.24E-01	2.31E-01	2.39E-01	2.46E-01	2.53E-01
6210.675	2.15E-01	2.23E-01	2.32E-01	2.41E-01	2.49E-01	2.56E-01
6210.625	2.10E-01	2.20E-01	2.32E-01	2.42E-01	2.51E-01	2.60E-01
6210.575	2.07E-01	2.16E-01	2.27E-01	2.38E-01	2.49E-01	2.60E-01



APPENDIX B Dispersion Modelling

6210.525	2.04E-01	2.11E-01	2.20E-01	2.31E-01	2.43E-01	2.56E-01
6210.475	2.04E-01	2.09E-01	2.16E-01	2.26E-01	2.37E-01	2.50E-01
6210.425	2.04E-01	2.09E-01	2.15E-01	2.22E-01	2.32E-01	2.43E-01
6210.375	2.03E-01	2.09E-01	2.14E-01	2.21E-01	2.29E-01	2.39E-01
6210.325	2.00E-01	2.07E-01	2.14E-01	2.21E-01	2.29E-01	2.37E-01
6210.275	1.98E-01	2.04E-01	2.12E-01	2.19E-01	2.28E-01	2.37E-01
6210.225	1.99E-01	2.04E-01	2.11E-01	2.18E-01	2.27E-01	2.35E-01
6210.175	2.04E-01	2.09E-01	2.14E-01	2.21E-01	2.27E-01	2.35E-01
6210.125	2.09E-01	2.14E-01	2.19E-01	2.25E-01	2.32E-01	2.38E-01
6210.075	2.13E-01	2.18E-01	2.24E-01	2.31E-01	2.38E-01	2.45E-01
6210.025	2.16E-01	2.21E-01	2.28E-01	2.35E-01	2.42E-01	2.50E-01
6209.975	2.19E-01	2.24E-01	2.31E-01	2.38E-01	2.46E-01	2.53E-01
6209.925	2.21E-01	2.28E-01	2.34E-01	2.42E-01	2.50E-01	2.58E-01
6209.875	2.24E-01	2.31E-01	2.38E-01	2.46E-01	2.54E-01	2.62E-01
6209.825	2.26E-01	2.33E-01	2.40E-01	2.48E-01	2.57E-01	2.65E-01
6209.775	2.27E-01	2.34E-01	2.41E-01	2.49E-01	2.58E-01	2.67E-01
6209.725	2.28E-01	2.35E-01	2.42E-01	2.50E-01	2.58E-01	2.68E-01
6209.675	2.27E-01	2.34E-01	2.42E-01	2.49E-01	2.58E-01	2.66E-01
6209.625	2.24E-01	2.31E-01	2.39E-01	2.46E-01	2.54E-01	2.62E-01
6209.575	2.19E-01	2.25E-01	2.32E-01	2.39E-01	2.47E-01	2.55E-01
6209.525	2.14E-01	2.20E-01	2.27E-01	2.33E-01	2.41E-01	2.49E-01
6209.475	2.10E-01	2.16E-01	2.23E-01	2.30E-01	2.37E-01	2.46E-01
6209.425	2.07E-01	2.13E-01	2.21E-01	2.27E-01	2.35E-01	2.43E-01
6209.375	2.06E-01	2.12E-01	2.19E-01	2.27E-01	2.34E-01	2.43E-01
6209.325	2.06E-01	2.13E-01	2.19E-01	2.27E-01	2.35E-01	2.44E-01
6209.275	2.07E-01	2.14E-01	2.21E-01	2.29E-01	2.37E-01	2.47E-01
6209.225	2.08E-01	2.16E-01	2.24E-01	2.32E-01	2.42E-01	2.51E-01
6209.175	2.11E-01	2.19E-01	2.28E-01	2.38E-01	2.47E-01	2.56E-01
6209.125	2.16E-01	2.24E-01	2.33E-01	2.42E-01	2.50E-01	2.58E-01
6209.075	2.20E-01	2.28E-01	2.36E-01	2.43E-01	2.50E-01	2.58E-01
6209.025	2.23E-01	2.29E-01	2.35E-01	2.41E-01	2.47E-01	2.54E-01
6208.975	2.22E-01	2.28E-01	2.32E-01	2.37E-01	2.42E-01	2.48E-01
6208.925	2.19E-01	2.24E-01	2.28E-01	2.32E-01	2.37E-01	2.42E-01
6208.875	2.16E-01	2.19E-01	2.23E-01	2.27E-01	2.31E-01	2.35E-01
6208.825	2.11E-01	2.15E-01	2.18E-01	2.21E-01	2.24E-01	2.28E-01
6208.775	2.06E-01	2.09E-01	2.12E-01	2.14E-01	2.18E-01	2.23E-01
6208.725	2.00E-01	2.03E-01	2.06E-01	2.10E-01	2.14E-01	2.18E-01
6208.675	1.95E-01	1.98E-01	2.02E-01	2.06E-01	2.09E-01	2.13E-01
6208.625	1.91E-01	1.94E-01	1.98E-01	2.00E-01	2.04E-01	2.06E-01
6208.575	1.87E-01	1.90E-01	1.92E-01	1.95E-01	1.96E-01	1.99E-01
6208.525	1.82E-01	1.84E-01	1.86E-01	1.87E-01	1.89E-01	1.92E-01
6208.475	1.77E-01	1.78E-01	1.79E-01	1.81E-01	1.84E-01	1.88E-01
6208.425	1.71E-01	1.72E-01	1.74E-01	1.77E-01	1.81E-01	1.85E-01
6208.375	1.65E-01	1.67E-01	1.70E-01	1.74E-01	1.77E-01	1.81E-01
6208.325	1.61E-01	1.64E-01	1.68E-01	1.71E-01	1.74E-01	1.76E-01
6208.275	1.59E-01	1.62E-01	1.65E-01	1.68E-01	1.70E-01	1.72E-01
6208.225	1.57E-01	1.59E-01	1.62E-01	1.64E-01	1.66E-01	1.67E-01
6208.175	1.54E-01	1.56E-01	1.58E-01	1.60E-01	1.61E-01	1.62E-01
6208.125	1.51E-01	1.53E-01	1.54E-01	1.55E-01	1.56E-01	1.56E-01
6208.075	1.48E-01	1.49E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01
6208.025	1.44E-01	1.45E-01	1.45E-01	1.45E-01	1.44E-01	1.43E-01
6207.975	1.40E-01	1.40E-01	1.40E-01	1.39E-01	1.38E-01	1.38E-01
6207.925	1.35E-01	1.35E-01	1.34E-01	1.33E-01	1.33E-01	1.35E-01
6207.875	1.31E-01	1.30E-01	1.28E-01	1.28E-01	1.29E-01	1.31E-01
6207.825	1.26E-01	1.26E-01	1.25E-01	1.25E-01	1.26E-01	1.30E-01
6207.775	1.22E-01	1.22E-01	1.23E-01	1.23E-01	1.25E-01	1.29E-01
6207.725	1.19E-01	1.20E-01	1.21E-01	1.21E-01	1.23E-01	1.28E-01
6207.675	1.16E-01	1.18E-01	1.20E-01	1.20E-01	1.23E-01	1.27E-01
6207.625	1.14E-01	1.17E-01	1.19E-01	1.20E-01	1.22E-01	1.24E-01
6207.575	1.13E-01	1.16E-01	1.18E-01	1.19E-01	1.20E-01	1.22E-01
6207.525	1.10E-01	1.14E-01	1.15E-01	1.16E-01	1.17E-01	1.21E-01
6207.475	1.08E-01	1.11E-01	1.13E-01	1.14E-01	1.15E-01	1.19E-01
6207.425	1.04E-01	1.07E-01	1.10E-01	1.12E-01	1.14E-01	1.18E-01
6207.375	1.03E-01	1.06E-01	1.08E-01	1.10E-01	1.12E-01	1.16E-01

X (km): 614.775 614.825 614.875 614.925 614.975 615.025

Y (km)

6212.375	1.88E-01	1.89E-01	1.89E-01	1.88E-01	1.87E-01	1.86E-01
6212.325	1.91E-01	1.92E-01	1.93E-01	1.93E-01	1.92E-01	1.91E-01



APPENDIX B Dispersion Modelling

6212.275	1.94E-01	1.96E-01	1.97E-01	1.97E-01	1.97E-01	1.95E-01
6212.225	1.97E-01	2.00E-01	2.00E-01	2.01E-01	2.01E-01	2.01E-01
6212.175	2.00E-01	2.03E-01	2.05E-01	2.06E-01	2.06E-01	2.06E-01
6212.125	2.03E-01	2.06E-01	2.09E-01	2.09E-01	2.11E-01	2.11E-01
6212.075	2.06E-01	2.09E-01	2.12E-01	2.15E-01	2.15E-01	2.16E-01
6212.025	2.09E-01	2.13E-01	2.16E-01	2.19E-01	2.21E-01	2.21E-01
6211.975	2.12E-01	2.16E-01	2.19E-01	2.22E-01	2.25E-01	2.26E-01
6211.925	2.14E-01	2.19E-01	2.23E-01	2.27E-01	2.30E-01	2.32E-01
6211.875	2.17E-01	2.21E-01	2.26E-01	2.30E-01	2.34E-01	2.37E-01
6211.825	2.20E-01	2.25E-01	2.30E-01	2.34E-01	2.38E-01	2.42E-01
6211.775	2.22E-01	2.27E-01	2.32E-01	2.37E-01	2.42E-01	2.46E-01
6211.725	2.24E-01	2.31E-01	2.36E-01	2.41E-01	2.46E-01	2.51E-01
6211.675	2.26E-01	2.32E-01	2.38E-01	2.44E-01	2.50E-01	2.55E-01
6211.625	2.27E-01	2.34E-01	2.41E-01	2.47E-01	2.52E-01	2.58E-01
6211.575	2.29E-01	2.37E-01	2.44E-01	2.50E-01	2.57E-01	2.63E-01
6211.525	2.30E-01	2.37E-01	2.45E-01	2.52E-01	2.59E-01	2.66E-01
6211.475	2.30E-01	2.38E-01	2.46E-01	2.54E-01	2.63E-01	2.70E-01
6211.425	2.32E-01	2.40E-01	2.49E-01	2.57E-01	2.65E-01	2.74E-01
6211.375	2.32E-01	2.41E-01	2.49E-01	2.58E-01	2.68E-01	2.76E-01
6211.325	2.32E-01	2.41E-01	2.50E-01	2.59E-01	2.69E-01	2.79E-01
6211.275	2.33E-01	2.41E-01	2.50E-01	2.60E-01	2.71E-01	2.81E-01
6211.225	2.34E-01	2.42E-01	2.52E-01	2.62E-01	2.72E-01	2.83E-01
6211.175	2.37E-01	2.45E-01	2.53E-01	2.63E-01	2.74E-01	2.84E-01
6211.125	2.39E-01	2.47E-01	2.55E-01	2.64E-01	2.75E-01	2.86E-01
6211.075	2.42E-01	2.49E-01	2.58E-01	2.67E-01	2.77E-01	2.87E-01
6211.025	2.45E-01	2.53E-01	2.61E-01	2.69E-01	2.79E-01	2.90E-01
6210.975	2.49E-01	2.56E-01	2.64E-01	2.73E-01	2.82E-01	2.94E-01
6210.925	2.53E-01	2.60E-01	2.68E-01	2.76E-01	2.86E-01	2.96E-01
6210.875	2.56E-01	2.64E-01	2.72E-01	2.80E-01	2.89E-01	2.99E-01
6210.825	2.59E-01	2.67E-01	2.76E-01	2.85E-01	2.93E-01	3.03E-01
6210.775	2.60E-01	2.69E-01	2.79E-01	2.89E-01	2.98E-01	3.07E-01
6210.725	2.61E-01	2.70E-01	2.80E-01	2.91E-01	3.02E-01	3.12E-01
6210.675	2.64E-01	2.72E-01	2.81E-01	2.92E-01	3.04E-01	3.16E-01
6210.625	2.67E-01	2.74E-01	2.82E-01	2.91E-01	3.03E-01	3.16E-01
6210.575	2.69E-01	2.78E-01	2.85E-01	2.92E-01	3.02E-01	3.13E-01
6210.525	2.68E-01	2.79E-01	2.89E-01	2.96E-01	3.02E-01	3.13E-01
6210.475	2.64E-01	2.76E-01	2.88E-01	2.99E-01	3.07E-01	3.16E-01
6210.425	2.56E-01	2.69E-01	2.82E-01	2.96E-01	3.08E-01	3.21E-01
6210.375	2.51E-01	2.62E-01	2.75E-01	2.90E-01	3.04E-01	3.22E-01
6210.325	2.47E-01	2.58E-01	2.70E-01	2.84E-01	2.98E-01	3.17E-01
6210.275	2.47E-01	2.57E-01	2.68E-01	2.81E-01	2.95E-01	3.12E-01
6210.225	2.45E-01	2.56E-01	2.67E-01	2.79E-01	2.93E-01	3.08E-01
6210.175	2.44E-01	2.54E-01	2.66E-01	2.79E-01	2.93E-01	3.07E-01
6210.125	2.45E-01	2.54E-01	2.64E-01	2.77E-01	2.90E-01	3.05E-01
6210.075	2.52E-01	2.59E-01	2.68E-01	2.79E-01	2.90E-01	3.04E-01
6210.025	2.59E-01	2.67E-01	2.76E-01	2.86E-01	2.96E-01	3.09E-01
6209.975	2.62E-01	2.71E-01	2.82E-01	2.93E-01	3.05E-01	3.17E-01
6209.925	2.66E-01	2.76E-01	2.86E-01	2.97E-01	3.10E-01	3.23E-01
6209.875	2.71E-01	2.81E-01	2.92E-01	3.03E-01	3.15E-01	3.28E-01
6209.825	2.75E-01	2.84E-01	2.95E-01	3.08E-01	3.21E-01	3.35E-01
6209.775	2.76E-01	2.87E-01	2.99E-01	3.12E-01	3.26E-01	3.39E-01
6209.725	2.77E-01	2.88E-01	3.01E-01	3.14E-01	3.26E-01	3.37E-01
6209.675	2.76E-01	2.87E-01	2.99E-01	3.10E-01	3.22E-01	3.35E-01
6209.625	2.72E-01	2.83E-01	2.94E-01	3.06E-01	3.17E-01	3.31E-01
6209.575	2.64E-01	2.75E-01	2.86E-01	2.99E-01	3.11E-01	3.25E-01
6209.525	2.58E-01	2.68E-01	2.79E-01	2.91E-01	3.05E-01	3.19E-01
6209.475	2.55E-01	2.65E-01	2.75E-01	2.88E-01	3.01E-01	3.15E-01
6209.425	2.52E-01	2.63E-01	2.73E-01	2.85E-01	2.99E-01	3.14E-01
6209.375	2.52E-01	2.62E-01	2.74E-01	2.86E-01	3.00E-01	3.15E-01
6209.325	2.54E-01	2.65E-01	2.77E-01	2.89E-01	3.03E-01	3.19E-01
6209.275	2.57E-01	2.69E-01	2.80E-01	2.93E-01	3.07E-01	3.20E-01
6209.225	2.62E-01	2.73E-01	2.84E-01	2.96E-01	3.08E-01	3.21E-01
6209.175	2.65E-01	2.75E-01	2.86E-01	2.96E-01	3.08E-01	3.20E-01
6209.125	2.67E-01	2.76E-01	2.84E-01	2.94E-01	3.05E-01	3.15E-01
6209.075	2.65E-01	2.73E-01	2.80E-01	2.90E-01	3.00E-01	3.11E-01
6209.025	2.60E-01	2.67E-01	2.75E-01	2.82E-01	2.92E-01	3.00E-01
6208.975	2.54E-01	2.60E-01	2.66E-01	2.73E-01	2.81E-01	2.89E-01
6208.925	2.47E-01	2.52E-01	2.58E-01	2.64E-01	2.72E-01	2.81E-01
6208.875	2.40E-01	2.45E-01	2.51E-01	2.58E-01	2.66E-01	2.73E-01
6208.825	2.33E-01	2.39E-01	2.46E-01	2.52E-01	2.59E-01	2.64E-01
6208.775	2.28E-01	2.34E-01	2.39E-01	2.44E-01	2.48E-01	2.52E-01



APPENDIX B Dispersion Modelling

6208.725	2.23E-01	2.27E-01	2.31E-01	2.34E-01	2.38E-01	2.44E-01
6208.675	2.16E-01	2.19E-01	2.22E-01	2.26E-01	2.31E-01	2.37E-01
6208.625	2.09E-01	2.11E-01	2.15E-01	2.20E-01	2.26E-01	2.31E-01
6208.575	2.01E-01	2.05E-01	2.10E-01	2.15E-01	2.20E-01	2.24E-01
6208.525	1.96E-01	2.01E-01	2.06E-01	2.10E-01	2.14E-01	2.16E-01
6208.475	1.93E-01	1.97E-01	2.01E-01	2.04E-01	2.06E-01	2.08E-01
6208.425	1.89E-01	1.92E-01	1.95E-01	1.97E-01	1.98E-01	1.99E-01
6208.375	1.84E-01	1.86E-01	1.88E-01	1.90E-01	1.91E-01	1.90E-01
6208.325	1.78E-01	1.81E-01	1.82E-01	1.83E-01	1.83E-01	1.83E-01
6208.275	1.73E-01	1.75E-01	1.76E-01	1.75E-01	1.76E-01	1.78E-01
6208.225	1.68E-01	1.69E-01	1.68E-01	1.69E-01	1.71E-01	1.75E-01
6208.175	1.62E-01	1.62E-01	1.62E-01	1.64E-01	1.68E-01	1.73E-01
6208.125	1.55E-01	1.55E-01	1.57E-01	1.60E-01	1.65E-01	1.70E-01
6208.075	1.49E-01	1.51E-01	1.54E-01	1.58E-01	1.62E-01	1.68E-01
6208.025	1.44E-01	1.48E-01	1.52E-01	1.57E-01	1.62E-01	1.67E-01
6207.975	1.41E-01	1.45E-01	1.51E-01	1.57E-01	1.61E-01	1.66E-01
6207.925	1.38E-01	1.44E-01	1.50E-01	1.57E-01	1.62E-01	1.67E-01
6207.875	1.37E-01	1.43E-01	1.50E-01	1.56E-01	1.61E-01	1.65E-01
6207.825	1.37E-01	1.43E-01	1.49E-01	1.54E-01	1.59E-01	1.63E-01
6207.775	1.35E-01	1.42E-01	1.47E-01	1.52E-01	1.58E-01	1.63E-01
6207.725	1.33E-01	1.39E-01	1.44E-01	1.50E-01	1.56E-01	1.62E-01
6207.675	1.32E-01	1.36E-01	1.43E-01	1.50E-01	1.55E-01	1.60E-01
6207.625	1.29E-01	1.36E-01	1.43E-01	1.48E-01	1.54E-01	1.58E-01
6207.575	1.29E-01	1.36E-01	1.42E-01	1.47E-01	1.51E-01	1.55E-01
6207.525	1.28E-01	1.35E-01	1.41E-01	1.45E-01	1.47E-01	1.51E-01
6207.475	1.26E-01	1.33E-01	1.37E-01	1.40E-01	1.42E-01	1.48E-01
6207.425	1.23E-01	1.30E-01	1.33E-01	1.35E-01	1.38E-01	1.47E-01
6207.375	1.22E-01	1.27E-01	1.27E-01	1.30E-01	1.35E-01	1.43E-01

X (km): 615.075 615.125 615.175 615.225 615.275 615.325

Y (km)

6212.375	1.84E-01	1.82E-01	1.81E-01	1.80E-01	1.79E-01	1.78E-01
6212.325	1.89E-01	1.87E-01	1.86E-01	1.85E-01	1.84E-01	1.82E-01
6212.275	1.94E-01	1.92E-01	1.91E-01	1.89E-01	1.88E-01	1.87E-01
6212.225	1.99E-01	1.97E-01	1.96E-01	1.94E-01	1.93E-01	1.92E-01
6212.175	2.05E-01	2.03E-01	2.02E-01	2.00E-01	1.99E-01	1.98E-01
6212.125	2.10E-01	2.09E-01	2.07E-01	2.05E-01	2.03E-01	2.02E-01
6212.075	2.16E-01	2.14E-01	2.13E-01	2.11E-01	2.10E-01	2.08E-01
6212.025	2.21E-01	2.21E-01	2.19E-01	2.17E-01	2.15E-01	2.14E-01
6211.975	2.27E-01	2.26E-01	2.25E-01	2.23E-01	2.21E-01	2.20E-01
6211.925	2.33E-01	2.33E-01	2.32E-01	2.30E-01	2.28E-01	2.27E-01
6211.875	2.38E-01	2.39E-01	2.38E-01	2.37E-01	2.35E-01	2.33E-01
6211.825	2.44E-01	2.45E-01	2.46E-01	2.45E-01	2.43E-01	2.41E-01
6211.775	2.49E-01	2.51E-01	2.52E-01	2.51E-01	2.50E-01	2.48E-01
6211.725	2.55E-01	2.58E-01	2.59E-01	2.60E-01	2.59E-01	2.57E-01
6211.675	2.60E-01	2.64E-01	2.66E-01	2.67E-01	2.67E-01	2.65E-01
6211.625	2.65E-01	2.70E-01	2.73E-01	2.75E-01	2.75E-01	2.74E-01
6211.575	2.69E-01	2.75E-01	2.80E-01	2.83E-01	2.84E-01	2.83E-01
6211.525	2.74E-01	2.80E-01	2.86E-01	2.90E-01	2.92E-01	2.93E-01
6211.475	2.77E-01	2.85E-01	2.92E-01	2.97E-01	3.01E-01	3.02E-01
6211.425	2.82E-01	2.89E-01	2.97E-01	3.05E-01	3.09E-01	3.11E-01
6211.375	2.85E-01	2.94E-01	3.01E-01	3.10E-01	3.17E-01	3.22E-01
6211.325	2.88E-01	2.97E-01	3.06E-01	3.15E-01	3.25E-01	3.30E-01
6211.275	2.91E-01	3.01E-01	3.11E-01	3.21E-01	3.31E-01	3.38E-01
6211.225	2.94E-01	3.04E-01	3.16E-01	3.27E-01	3.35E-01	3.47E-01
6211.175	2.95E-01	3.08E-01	3.19E-01	3.30E-01	3.42E-01	3.53E-01
6211.125	2.99E-01	3.11E-01	3.22E-01	3.34E-01	3.47E-01	3.59E-01
6211.075	3.01E-01	3.13E-01	3.26E-01	3.38E-01	3.51E-01	3.66E-01
6211.025	3.03E-01	3.15E-01	3.28E-01	3.42E-01	3.55E-01	3.71E-01
6210.975	3.04E-01	3.18E-01	3.33E-01	3.46E-01	3.59E-01	3.75E-01
6210.925	3.08E-01	3.20E-01	3.34E-01	3.49E-01	3.62E-01	3.79E-01
6210.875	3.11E-01	3.23E-01	3.35E-01	3.53E-01	3.65E-01	3.79E-01
6210.825	3.15E-01	3.25E-01	3.37E-01	3.56E-01	3.70E-01	3.83E-01
6210.775	3.18E-01	3.28E-01	3.40E-01	3.59E-01	3.74E-01	3.87E-01
6210.725	3.20E-01	3.30E-01	3.44E-01	3.62E-01	3.76E-01	3.91E-01
6210.675	3.25E-01	3.34E-01	3.43E-01	3.61E-01	3.78E-01	3.94E-01
6210.625	3.27E-01	3.38E-01	3.49E-01	3.62E-01	3.79E-01	3.96E-01
6210.575	3.27E-01	3.40E-01	3.51E-01	3.66E-01	3.82E-01	4.00E-01
6210.525	3.24E-01	3.38E-01	3.53E-01	3.69E-01	3.86E-01	4.05E-01



APPENDIX B Dispersion Modelling

6210.475	3.25E-01	3.37E-01	3.52E-01	3.71E-01	3.88E-01	4.09E-01
6210.425	3.32E-01	3.42E-01	3.56E-01	3.71E-01	3.91E-01	4.12E-01
6210.375	3.38E-01	3.52E-01	3.67E-01	3.79E-01	3.97E-01	4.18E-01
6210.325	3.36E-01	3.56E-01	3.74E-01	3.92E-01	4.07E-01	4.23E-01
6210.275	3.31E-01	3.52E-01	3.73E-01	3.95E-01	4.14E-01	4.33E-01
6210.225	3.27E-01	3.46E-01	3.66E-01	3.88E-01	4.12E-01	4.32E-01
6210.175	3.23E-01	3.41E-01	3.61E-01	3.82E-01	4.04E-01	4.25E-01
6210.125	3.22E-01	3.39E-01	3.58E-01	3.81E-01	4.03E-01	4.23E-01
6210.075	3.20E-01	3.38E-01	3.57E-01	3.81E-01	4.04E-01	4.25E-01
6210.025	3.22E-01	3.38E-01	3.57E-01	3.79E-01	4.02E-01	4.27E-01
6209.975	3.31E-01	3.45E-01	3.61E-01	3.80E-01	4.04E-01	4.31E-01
6209.925	3.39E-01	3.54E-01	3.70E-01	3.88E-01	4.09E-01	4.33E-01
6209.875	3.42E-01	3.59E-01	3.77E-01	3.97E-01	4.18E-01	4.44E-01
6209.825	3.48E-01	3.64E-01	3.82E-01	4.01E-01	4.23E-01	4.47E-01
6209.775	3.51E-01	3.66E-01	3.83E-01	4.04E-01	4.25E-01	4.47E-01
6209.725	3.51E-01	3.66E-01	3.82E-01	4.01E-01	4.22E-01	4.45E-01
6209.675	3.47E-01	3.62E-01	3.79E-01	3.98E-01	4.17E-01	4.43E-01
6209.625	3.45E-01	3.59E-01	3.76E-01	3.94E-01	4.14E-01	4.40E-01
6209.575	3.39E-01	3.52E-01	3.67E-01	3.85E-01	4.06E-01	4.32E-01
6209.525	3.33E-01	3.45E-01	3.60E-01	3.77E-01	3.98E-01	4.23E-01
6209.475	3.29E-01	3.41E-01	3.57E-01	3.76E-01	3.98E-01	4.23E-01
6209.425	3.27E-01	3.42E-01	3.61E-01	3.82E-01	4.04E-01	4.30E-01
6209.375	3.30E-01	3.48E-01	3.66E-01	3.86E-01	4.08E-01	4.30E-01
6209.325	3.34E-01	3.50E-01	3.67E-01	3.87E-01	4.10E-01	4.31E-01
6209.275	3.35E-01	3.52E-01	3.69E-01	3.89E-01	4.11E-01	4.28E-01
6209.225	3.37E-01	3.51E-01	3.69E-01	3.85E-01	4.03E-01	4.19E-01
6209.175	3.32E-01	3.47E-01	3.64E-01	3.77E-01	3.90E-01	4.01E-01
6209.125	3.28E-01	3.39E-01	3.51E-01	3.63E-01	3.71E-01	3.80E-01
6209.075	3.20E-01	3.28E-01	3.36E-01	3.44E-01	3.51E-01	3.60E-01
6209.025	3.07E-01	3.14E-01	3.21E-01	3.28E-01	3.35E-01	3.40E-01
6208.975	2.96E-01	3.03E-01	3.10E-01	3.16E-01	3.18E-01	3.21E-01
6208.925	2.88E-01	2.95E-01	2.98E-01	3.03E-01	3.06E-01	3.08E-01
6208.875	2.79E-01	2.83E-01	2.87E-01	2.91E-01	2.96E-01	2.98E-01
6208.825	2.68E-01	2.72E-01	2.78E-01	2.82E-01	2.85E-01	2.87E-01
6208.775	2.57E-01	2.64E-01	2.70E-01	2.73E-01	2.73E-01	2.74E-01
6208.725	2.50E-01	2.56E-01	2.61E-01	2.62E-01	2.60E-01	2.60E-01
6208.675	2.43E-01	2.47E-01	2.51E-01	2.50E-01	2.48E-01	2.46E-01
6208.625	2.35E-01	2.38E-01	2.39E-01	2.37E-01	2.34E-01	2.36E-01
6208.575	2.26E-01	2.27E-01	2.26E-01	2.24E-01	2.25E-01	2.31E-01
6208.525	2.17E-01	2.16E-01	2.14E-01	2.15E-01	2.20E-01	2.29E-01
6208.475	2.07E-01	2.05E-01	2.06E-01	2.10E-01	2.18E-01	2.27E-01
6208.425	1.98E-01	1.98E-01	2.01E-01	2.08E-01	2.17E-01	2.26E-01
6208.375	1.91E-01	1.94E-01	1.99E-01	2.07E-01	2.14E-01	2.22E-01
6208.325	1.86E-01	1.91E-01	1.98E-01	2.04E-01	2.11E-01	2.19E-01
6208.275	1.83E-01	1.89E-01	1.96E-01	2.00E-01	2.06E-01	2.12E-01
6208.225	1.81E-01	1.87E-01	1.93E-01	1.96E-01	2.00E-01	2.05E-01
6208.175	1.79E-01	1.85E-01	1.90E-01	1.94E-01	1.98E-01	2.04E-01
6208.125	1.76E-01	1.81E-01	1.86E-01	1.91E-01	1.96E-01	2.02E-01
6208.075	1.73E-01	1.77E-01	1.83E-01	1.89E-01	1.92E-01	1.99E-01
6208.025	1.72E-01	1.77E-01	1.84E-01	1.91E-01	1.95E-01	2.00E-01
6207.975	1.72E-01	1.77E-01	1.84E-01	1.90E-01	1.96E-01	2.02E-01
6207.925	1.71E-01	1.76E-01	1.82E-01	1.88E-01	1.94E-01	2.00E-01
6207.875	1.69E-01	1.73E-01	1.78E-01	1.83E-01	1.89E-01	1.95E-01
6207.825	1.67E-01	1.71E-01	1.75E-01	1.80E-01	1.87E-01	1.92E-01
6207.775	1.68E-01	1.71E-01	1.74E-01	1.80E-01	1.86E-01	1.89E-01
6207.725	1.67E-01	1.70E-01	1.73E-01	1.79E-01	1.84E-01	1.85E-01
6207.675	1.64E-01	1.68E-01	1.73E-01	1.79E-01	1.82E-01	1.83E-01
6207.625	1.62E-01	1.66E-01	1.72E-01	1.77E-01	1.79E-01	1.80E-01
6207.575	1.59E-01	1.65E-01	1.70E-01	1.74E-01	1.75E-01	1.76E-01
6207.525	1.57E-01	1.63E-01	1.69E-01	1.71E-01	1.72E-01	1.72E-01
6207.475	1.55E-01	1.62E-01	1.66E-01	1.67E-01	1.68E-01	1.67E-01
6207.425	1.54E-01	1.59E-01	1.62E-01	1.63E-01	1.63E-01	1.63E-01
6207.375	1.51E-01	1.55E-01	1.56E-01	1.58E-01	1.59E-01	1.56E-01

X (km): 615.375 615.425 615.475 615.525 615.575 615.625

Y (km)

6212.375	1.78E-01	1.78E-01	1.80E-01	1.83E-01	1.85E-01	1.88E-01
6212.325	1.82E-01	1.82E-01	1.84E-01	1.86E-01	1.89E-01	1.92E-01
6212.275	1.86E-01	1.86E-01	1.87E-01	1.89E-01	1.92E-01	1.95E-01



APPENDIX B Dispersion Modelling

6212.225	1.91E-01	1.91E-01	1.91E-01	1.93E-01	1.96E-01	1.99E-01
6212.175	1.97E-01	1.96E-01	1.96E-01	1.98E-01	2.00E-01	2.03E-01
6212.125	2.01E-01	2.01E-01	2.01E-01	2.02E-01	2.04E-01	2.07E-01
6212.075	2.07E-01	2.06E-01	2.06E-01	2.06E-01	2.09E-01	2.11E-01
6212.025	2.13E-01	2.12E-01	2.12E-01	2.12E-01	2.14E-01	2.16E-01
6211.975	2.19E-01	2.18E-01	2.17E-01	2.18E-01	2.19E-01	2.21E-01
6211.925	2.25E-01	2.25E-01	2.24E-01	2.24E-01	2.25E-01	2.27E-01
6211.875	2.32E-01	2.31E-01	2.31E-01	2.31E-01	2.32E-01	2.33E-01
6211.825	2.39E-01	2.38E-01	2.37E-01	2.37E-01	2.38E-01	2.39E-01
6211.775	2.47E-01	2.45E-01	2.45E-01	2.45E-01	2.45E-01	2.46E-01
6211.725	2.54E-01	2.53E-01	2.53E-01	2.52E-01	2.53E-01	2.53E-01
6211.675	2.63E-01	2.61E-01	2.60E-01	2.60E-01	2.60E-01	2.61E-01
6211.625	2.71E-01	2.70E-01	2.69E-01	2.68E-01	2.69E-01	2.68E-01
6211.575	2.81E-01	2.79E-01	2.78E-01	2.77E-01	2.77E-01	2.78E-01
6211.525	2.92E-01	2.89E-01	2.87E-01	2.86E-01	2.86E-01	2.87E-01
6211.475	3.02E-01	3.00E-01	2.98E-01	2.96E-01	2.96E-01	2.97E-01
6211.425	3.12E-01	3.12E-01	3.08E-01	3.08E-01	3.06E-01	3.06E-01
6211.375	3.23E-01	3.23E-01	3.21E-01	3.19E-01	3.18E-01	3.18E-01
6211.325	3.33E-01	3.35E-01	3.33E-01	3.32E-01	3.30E-01	3.30E-01
6211.275	3.45E-01	3.47E-01	3.47E-01	3.45E-01	3.43E-01	3.42E-01
6211.225	3.54E-01	3.59E-01	3.60E-01	3.59E-01	3.57E-01	3.56E-01
6211.175	3.63E-01	3.70E-01	3.73E-01	3.73E-01	3.72E-01	3.71E-01
6211.125	3.72E-01	3.81E-01	3.86E-01	3.88E-01	3.87E-01	3.86E-01
6211.075	3.78E-01	3.91E-01	3.98E-01	4.03E-01	4.03E-01	4.02E-01
6211.025	3.84E-01	4.00E-01	4.10E-01	4.16E-01	4.18E-01	4.18E-01
6210.975	3.91E-01	4.07E-01	4.21E-01	4.30E-01	4.34E-01	4.36E-01
6210.925	3.96E-01	4.13E-01	4.30E-01	4.42E-01	4.49E-01	4.51E-01
6210.875	3.97E-01	4.15E-01	4.35E-01	4.53E-01	4.64E-01	4.66E-01
6210.825	3.99E-01	4.17E-01	4.39E-01	4.59E-01	4.77E-01	4.84E-01
6210.775	4.01E-01	4.20E-01	4.43E-01	4.66E-01	4.86E-01	4.99E-01
6210.725	4.01E-01	4.24E-01	4.46E-01	4.69E-01	4.94E-01	5.12E-01
6210.675	4.09E-01	4.28E-01	4.48E-01	4.73E-01	4.99E-01	5.20E-01
6210.625	4.16E-01	4.33E-01	4.55E-01	4.77E-01	5.01E-01	5.28E-01
6210.575	4.20E-01	4.43E-01	4.64E-01	4.84E-01	5.06E-01	5.33E-01
6210.525	4.26E-01	4.49E-01	4.71E-01	4.95E-01	5.16E-01	5.40E-01
6210.475	4.30E-01	4.55E-01	4.81E-01	5.08E-01	5.31E-01	5.53E-01
6210.425	4.34E-01	4.60E-01	4.87E-01	5.17E-01	5.48E-01	5.73E-01
6210.375	4.39E-01	4.64E-01	4.96E-01	5.33E-01	5.65E-01	5.96E-01
6210.325	4.45E-01	4.70E-01	5.04E-01	5.42E-01	5.78E-01	6.21E-01
6210.275	4.54E-01	4.79E-01	5.15E-01	5.47E-01	5.90E-01	6.41E-01
6210.225	4.56E-01	4.85E-01	5.19E-01	5.56E-01	5.87E-01	6.32E-01
6210.175	4.49E-01	4.75E-01	5.05E-01	5.46E-01	5.82E-01	6.26E-01
6210.125	4.47E-01	4.75E-01	5.01E-01	5.33E-01	5.71E-01	6.22E-01
6210.075	4.51E-01	4.81E-01	5.11E-01	5.43E-01	5.75E-01	6.18E-01
6210.025	4.54E-01	4.87E-01	5.21E-01	5.60E-01	5.97E-01	6.36E-01
6209.975	4.59E-01	4.90E-01	5.26E-01	5.69E-01	6.14E-01	6.64E-01
6209.925	4.61E-01	4.92E-01	5.31E-01	5.72E-01	6.22E-01	6.81E-01
6209.875	4.68E-01	4.97E-01	5.29E-01	5.72E-01	6.24E-01	6.81E-01
6209.825	4.77E-01	5.08E-01	5.42E-01	5.79E-01	6.23E-01	6.80E-01
6209.775	4.76E-01	5.06E-01	5.39E-01	5.80E-01	6.25E-01	6.81E-01
6209.725	4.71E-01	5.00E-01	5.30E-01	5.67E-01	6.14E-01	6.64E-01
6209.675	4.69E-01	5.00E-01	5.31E-01	5.69E-01	6.14E-01	6.65E-01
6209.625	4.67E-01	4.98E-01	5.33E-01	5.73E-01	6.19E-01	6.72E-01
6209.575	4.58E-01	4.88E-01	5.23E-01	5.63E-01	6.10E-01	6.63E-01
6209.525	4.50E-01	4.80E-01	5.15E-01	5.54E-01	5.98E-01	6.44E-01
6209.475	4.53E-01	4.82E-01	5.14E-01	5.45E-01	5.82E-01	6.32E-01
6209.425	4.56E-01	4.82E-01	5.12E-01	5.49E-01	5.86E-01	6.25E-01
6209.375	4.56E-01	4.85E-01	5.13E-01	5.42E-01	5.70E-01	5.93E-01
6209.325	4.55E-01	4.79E-01	5.00E-01	5.21E-01	5.39E-01	5.59E-01
6209.275	4.44E-01	4.61E-01	4.81E-01	4.94E-01	5.02E-01	5.15E-01
6209.225	4.29E-01	4.39E-01	4.55E-01	4.62E-01	4.74E-01	4.84E-01
6209.175	4.10E-01	4.18E-01	4.28E-01	4.35E-01	4.40E-01	4.45E-01
6209.125	3.88E-01	3.98E-01	4.01E-01	4.02E-01	4.07E-01	4.21E-01
6209.075	3.67E-01	3.70E-01	3.72E-01	3.80E-01	3.87E-01	3.98E-01
6209.025	3.43E-01	3.47E-01	3.53E-01	3.60E-01	3.68E-01	3.75E-01
6208.975	3.25E-01	3.31E-01	3.38E-01	3.44E-01	3.48E-01	3.50E-01
6208.925	3.12E-01	3.18E-01	3.23E-01	3.26E-01	3.27E-01	3.38E-01
6208.875	3.01E-01	3.05E-01	3.07E-01	3.08E-01	3.16E-01	3.32E-01
6208.825	2.88E-01	2.89E-01	2.88E-01	2.95E-01	3.12E-01	3.33E-01
6208.775	2.74E-01	2.73E-01	2.78E-01	2.89E-01	3.08E-01	3.28E-01
6208.725	2.59E-01	2.62E-01	2.71E-01	2.86E-01	3.03E-01	3.26E-01



APPENDIX B Dispersion Modelling

6208.675	2.50E-01	2.58E-01	2.70E-01	2.84E-01	3.02E-01	3.25E-01
6208.625	2.44E-01	2.57E-01	2.71E-01	2.87E-01	3.03E-01	3.23E-01
6208.575	2.42E-01	2.54E-01	2.69E-01	2.87E-01	3.05E-01	3.22E-01
6208.525	2.40E-01	2.53E-01	2.69E-01	2.86E-01	3.02E-01	3.18E-01
6208.475	2.38E-01	2.52E-01	2.68E-01	2.84E-01	2.96E-01	3.12E-01
6208.425	2.36E-01	2.52E-01	2.70E-01	2.82E-01	2.93E-01	3.05E-01
6208.375	2.33E-01	2.50E-01	2.68E-01	2.80E-01	2.93E-01	3.00E-01
6208.325	2.29E-01	2.44E-01	2.59E-01	2.73E-01	2.86E-01	2.92E-01
6208.275	2.20E-01	2.35E-01	2.50E-01	2.64E-01	2.73E-01	2.80E-01
6208.225	2.14E-01	2.28E-01	2.42E-01	2.54E-01	2.59E-01	2.65E-01
6208.175	2.11E-01	2.23E-01	2.36E-01	2.43E-01	2.47E-01	2.51E-01
6208.125	2.09E-01	2.19E-01	2.29E-01	2.35E-01	2.37E-01	2.39E-01
6208.075	2.08E-01	2.19E-01	2.24E-01	2.27E-01	2.28E-01	2.30E-01
6208.025	2.10E-01	2.18E-01	2.18E-01	2.18E-01	2.20E-01	2.21E-01
6207.975	2.10E-01	2.13E-01	2.10E-01	2.10E-01	2.12E-01	2.13E-01
6207.925	2.05E-01	2.05E-01	2.03E-01	2.05E-01	2.06E-01	2.07E-01
6207.875	1.99E-01	1.99E-01	1.98E-01	2.00E-01	2.01E-01	2.02E-01
6207.825	1.93E-01	1.94E-01	1.95E-01	1.96E-01	1.97E-01	1.97E-01
6207.775	1.90E-01	1.92E-01	1.94E-01	1.95E-01	1.95E-01	1.95E-01
6207.725	1.87E-01	1.90E-01	1.93E-01	1.94E-01	1.94E-01	1.93E-01
6207.675	1.84E-01	1.86E-01	1.89E-01	1.89E-01	1.89E-01	1.89E-01
6207.625	1.81E-01	1.82E-01	1.83E-01	1.84E-01	1.85E-01	1.83E-01
6207.575	1.76E-01	1.77E-01	1.78E-01	1.77E-01	1.77E-01	1.77E-01
6207.525	1.71E-01	1.73E-01	1.74E-01	1.71E-01	1.67E-01	1.67E-01
6207.475	1.67E-01	1.68E-01	1.68E-01	1.64E-01	1.59E-01	1.59E-01
6207.425	1.61E-01	1.61E-01	1.61E-01	1.58E-01	1.54E-01	1.53E-01
6207.375	1.54E-01	1.55E-01	1.56E-01	1.53E-01	1.49E-01	1.47E-01

X (km): 615.675 615.725 615.775 615.825 615.875 615.925

Y (km)

6212.375	1.90E-01	1.90E-01	1.88E-01	1.85E-01	1.83E-01	1.81E-01
6212.325	1.94E-01	1.95E-01	1.94E-01	1.91E-01	1.88E-01	1.86E-01
6212.275	1.98E-01	1.99E-01	1.99E-01	1.96E-01	1.93E-01	1.91E-01
6212.225	2.02E-01	2.03E-01	2.03E-01	2.01E-01	1.98E-01	1.96E-01
6212.175	2.06E-01	2.08E-01	2.07E-01	2.05E-01	2.03E-01	2.01E-01
6212.125	2.10E-01	2.13E-01	2.13E-01	2.11E-01	2.08E-01	2.06E-01
6212.075	2.15E-01	2.18E-01	2.19E-01	2.17E-01	2.13E-01	2.11E-01
6212.025	2.20E-01	2.23E-01	2.25E-01	2.23E-01	2.20E-01	2.18E-01
6211.975	2.24E-01	2.28E-01	2.30E-01	2.30E-01	2.28E-01	2.25E-01
6211.925	2.30E-01	2.33E-01	2.36E-01	2.37E-01	2.36E-01	2.33E-01
6211.875	2.36E-01	2.39E-01	2.42E-01	2.44E-01	2.43E-01	2.41E-01
6211.825	2.42E-01	2.45E-01	2.49E-01	2.50E-01	2.50E-01	2.49E-01
6211.775	2.48E-01	2.51E-01	2.55E-01	2.58E-01	2.58E-01	2.57E-01
6211.725	2.55E-01	2.58E-01	2.62E-01	2.65E-01	2.66E-01	2.65E-01
6211.675	2.63E-01	2.65E-01	2.70E-01	2.73E-01	2.74E-01	2.74E-01
6211.625	2.71E-01	2.74E-01	2.77E-01	2.81E-01	2.83E-01	2.82E-01
6211.575	2.79E-01	2.82E-01	2.85E-01	2.90E-01	2.92E-01	2.91E-01
6211.525	2.88E-01	2.90E-01	2.94E-01	2.98E-01	3.02E-01	3.01E-01
6211.475	2.98E-01	3.00E-01	3.03E-01	3.07E-01	3.11E-01	3.12E-01
6211.425	3.08E-01	3.10E-01	3.13E-01	3.17E-01	3.21E-01	3.23E-01
6211.375	3.19E-01	3.21E-01	3.23E-01	3.28E-01	3.32E-01	3.35E-01
6211.325	3.31E-01	3.32E-01	3.35E-01	3.38E-01	3.44E-01	3.47E-01
6211.275	3.43E-01	3.45E-01	3.46E-01	3.51E-01	3.56E-01	3.59E-01
6211.225	3.56E-01	3.57E-01	3.59E-01	3.64E-01	3.68E-01	3.73E-01
6211.175	3.71E-01	3.72E-01	3.74E-01	3.76E-01	3.81E-01	3.86E-01
6211.125	3.86E-01	3.87E-01	3.88E-01	3.91E-01	3.95E-01	4.02E-01
6211.075	4.02E-01	4.04E-01	4.05E-01	4.07E-01	4.10E-01	4.17E-01
6211.025	4.19E-01	4.20E-01	4.24E-01	4.24E-01	4.26E-01	4.30E-01
6210.975	4.36E-01	4.38E-01	4.41E-01	4.43E-01	4.44E-01	4.47E-01
6210.925	4.53E-01	4.56E-01	4.62E-01	4.64E-01	4.64E-01	4.62E-01
6210.875	4.69E-01	4.73E-01	4.80E-01	4.84E-01	4.83E-01	4.80E-01
6210.825	4.82E-01	4.92E-01	4.98E-01	5.03E-01	5.02E-01	5.00E-01
6210.775	5.02E-01	5.08E-01	5.15E-01	5.23E-01	5.23E-01	5.26E-01
6210.725	5.22E-01	5.29E-01	5.35E-01	5.45E-01	5.49E-01	5.51E-01
6210.675	5.38E-01	5.48E-01	5.61E-01	5.70E-01	5.79E-01	5.84E-01
6210.625	5.50E-01	5.69E-01	5.85E-01	5.99E-01	6.11E-01	6.23E-01
6210.575	5.60E-01	5.87E-01	6.08E-01	6.30E-01	6.49E-01	6.69E-01
6210.525	5.72E-01	6.01E-01	6.31E-01	6.54E-01	6.74E-01	7.07E-01
6210.475	5.83E-01	6.15E-01	6.50E-01	6.78E-01	7.07E-01	7.42E-01



APPENDIX B Dispersion Modelling

6210.425	5.95E-01	6.30E-01	6.68E-01	7.03E-01	7.34E-01	7.74E-01
6210.375	6.20E-01	6.51E-01	6.90E-01	7.27E-01	7.65E-01	8.08E-01
6210.325	6.55E-01	6.79E-01	7.13E-01	7.55E-01	7.91E-01	8.42E-01
6210.275	6.93E-01	7.23E-01	7.47E-01	7.86E-01	8.24E-01	8.73E-01
6210.225	6.90E-01	7.49E-01	7.82E-01	8.21E-01	8.68E-01	9.06E-01
6210.175	6.81E-01	7.55E-01	8.28E-01	8.67E-01	9.18E-01	9.52E-01
6210.125	6.83E-01	7.58E-01	8.56E-01	9.28E-01	9.84E-01	1.03E+00
6210.075	6.80E-01	7.50E-01	8.55E-01	9.73E-01	1.06E+00	1.12E+00
6210.025	6.80E-01	7.51E-01	8.32E-01	9.63E-01	1.12E+00	1.20E+00
6209.975	7.11E-01	7.68E-01	8.47E-01	9.45E-01	1.11E+00	1.28E+00
6209.925	7.41E-01	8.16E-01	8.82E-01	9.74E-01	1.12E+00	1.32E+00
6209.875	7.50E-01	8.35E-01	9.30E-01	1.02E+00	1.15E+00	1.34E+00
6209.825	7.51E-01	8.29E-01	9.24E-01	1.04E+00	1.17E+00	1.35E+00
6209.775	7.36E-01	7.96E-01	8.95E-01	1.02E+00	1.15E+00	1.33E+00
6209.725	7.21E-01	7.96E-01	8.64E-01	9.85E-01	1.12E+00	1.30E+00
6209.675	7.26E-01	7.92E-01	8.65E-01	9.78E-01	1.10E+00	1.27E+00
6209.625	7.35E-01	8.09E-01	8.96E-01	9.95E-01	1.10E+00	1.25E+00
6209.575	7.22E-01	7.92E-01	8.78E-01	9.61E-01	1.07E+00	1.20E+00
6209.525	6.95E-01	7.56E-01	8.31E-01	9.19E-01	9.89E-01	1.09E+00
6209.475	6.81E-01	7.32E-01	7.98E-01	8.64E-01	9.37E-01	1.01E+00
6209.425	6.65E-01	7.06E-01	7.55E-01	8.08E-01	8.53E-01	8.85E-01
6209.375	6.27E-01	6.54E-01	6.83E-01	7.21E-01	7.51E-01	7.76E-01
6209.325	5.77E-01	5.98E-01	6.21E-01	6.42E-01	6.87E-01	7.08E-01
6209.275	5.36E-01	5.44E-01	5.61E-01	5.96E-01	6.31E-01	6.50E-01
6209.225	4.88E-01	5.06E-01	5.23E-01	5.47E-01	5.75E-01	6.13E-01
6209.175	4.57E-01	4.75E-01	4.89E-01	4.99E-01	5.45E-01	6.02E-01
6209.125	4.31E-01	4.42E-01	4.49E-01	4.83E-01	5.35E-01	5.95E-01
6209.075	4.04E-01	4.08E-01	4.34E-01	4.74E-01	5.35E-01	5.81E-01
6209.025	3.78E-01	3.95E-01	4.28E-01	4.73E-01	5.24E-01	5.58E-01
6208.975	3.62E-01	3.90E-01	4.22E-01	4.74E-01	5.20E-01	5.30E-01
6208.925	3.59E-01	3.85E-01	4.25E-01	4.67E-01	4.99E-01	5.06E-01
6208.875	3.56E-01	3.86E-01	4.23E-01	4.60E-01	4.74E-01	4.85E-01
6208.825	3.55E-01	3.86E-01	4.18E-01	4.44E-01	4.53E-01	4.70E-01
6208.775	3.57E-01	3.84E-01	4.14E-01	4.27E-01	4.39E-01	4.57E-01
6208.725	3.55E-01	3.82E-01	4.05E-01	4.14E-01	4.28E-01	4.44E-01
6208.675	3.49E-01	3.78E-01	3.90E-01	4.00E-01	4.15E-01	4.26E-01
6208.625	3.47E-01	3.66E-01	3.64E-01	3.70E-01	3.84E-01	3.96E-01
6208.575	3.45E-01	3.57E-01	3.55E-01	3.51E-01	3.54E-01	3.62E-01
6208.525	3.33E-01	3.42E-01	3.45E-01	3.50E-01	3.36E-01	3.28E-01
6208.475	3.14E-01	3.19E-01	3.28E-01	3.34E-01	3.19E-01	3.04E-01
6208.425	3.05E-01	3.02E-01	3.04E-01	3.04E-01	2.97E-01	2.85E-01
6208.375	3.05E-01	3.03E-01	3.02E-01	2.92E-01	2.81E-01	2.72E-01
6208.325	2.97E-01	2.99E-01	2.99E-01	2.86E-01	2.70E-01	2.58E-01
6208.275	2.84E-01	2.87E-01	2.87E-01	2.74E-01	2.53E-01	2.39E-01
6208.225	2.70E-01	2.71E-01	2.66E-01	2.58E-01	2.40E-01	2.25E-01
6208.175	2.50E-01	2.51E-01	2.47E-01	2.43E-01	2.34E-01	2.28E-01
6208.125	2.40E-01	2.37E-01	2.34E-01	2.30E-01	2.25E-01	2.20E-01
6208.075	2.31E-01	2.28E-01	2.24E-01	2.22E-01	2.16E-01	2.13E-01
6208.025	2.22E-01	2.19E-01	2.16E-01	2.14E-01	2.09E-01	2.06E-01
6207.975	2.13E-01	2.13E-01	2.12E-01	2.09E-01	2.03E-01	1.99E-01
6207.925	2.09E-01	2.09E-01	2.07E-01	2.03E-01	2.00E-01	1.94E-01
6207.875	2.03E-01	2.03E-01	2.02E-01	1.99E-01	1.96E-01	1.90E-01
6207.825	1.98E-01	1.99E-01	1.97E-01	1.95E-01	1.93E-01	1.90E-01
6207.775	1.97E-01	1.96E-01	1.93E-01	1.90E-01	1.89E-01	1.87E-01
6207.725	1.94E-01	1.91E-01	1.86E-01	1.84E-01	1.82E-01	1.81E-01
6207.675	1.88E-01	1.85E-01	1.77E-01	1.77E-01	1.76E-01	1.75E-01
6207.625	1.82E-01	1.79E-01	1.77E-01	1.75E-01	1.74E-01	1.72E-01
6207.575	1.75E-01	1.76E-01	1.76E-01	1.77E-01	1.75E-01	1.74E-01
6207.525	1.69E-01	1.71E-01	1.72E-01	1.75E-01	1.76E-01	1.74E-01
6207.475	1.63E-01	1.68E-01	1.69E-01	1.72E-01	1.74E-01	1.72E-01
6207.425	1.57E-01	1.63E-01	1.66E-01	1.68E-01	1.69E-01	1.66E-01
6207.375	1.51E-01	1.57E-01	1.61E-01	1.63E-01	1.63E-01	1.60E-01

X (km): 615.975 616.025 616.075 616.125 616.175 616.225

Y (km)

6212.375	1.79E-01	1.78E-01	1.77E-01	1.76E-01	1.75E-01	1.75E-01
6212.325	1.84E-01	1.83E-01	1.81E-01	1.80E-01	1.80E-01	1.80E-01
6212.275	1.89E-01	1.88E-01	1.86E-01	1.85E-01	1.84E-01	1.84E-01
6212.225	1.94E-01	1.92E-01	1.91E-01	1.89E-01	1.89E-01	1.89E-01



APPENDIX B Dispersion Modelling

6212.175	1.99E-01	1.97E-01	1.96E-01	1.95E-01	1.94E-01	1.94E-01
6212.125	2.03E-01	2.02E-01	2.01E-01	2.01E-01	2.00E-01	2.00E-01
6212.075	2.09E-01	2.08E-01	2.07E-01	2.06E-01	2.05E-01	2.05E-01
6212.025	2.15E-01	2.13E-01	2.12E-01	2.12E-01	2.11E-01	2.11E-01
6211.975	2.22E-01	2.19E-01	2.17E-01	2.17E-01	2.16E-01	2.16E-01
6211.925	2.30E-01	2.27E-01	2.24E-01	2.21E-01	2.21E-01	2.22E-01
6211.875	2.38E-01	2.35E-01	2.32E-01	2.29E-01	2.27E-01	2.27E-01
6211.825	2.46E-01	2.43E-01	2.40E-01	2.38E-01	2.35E-01	2.33E-01
6211.775	2.55E-01	2.52E-01	2.49E-01	2.46E-01	2.44E-01	2.42E-01
6211.725	2.63E-01	2.60E-01	2.57E-01	2.55E-01	2.52E-01	2.49E-01
6211.675	2.72E-01	2.69E-01	2.66E-01	2.63E-01	2.61E-01	2.57E-01
6211.625	2.81E-01	2.78E-01	2.75E-01	2.72E-01	2.70E-01	2.68E-01
6211.575	2.91E-01	2.88E-01	2.85E-01	2.82E-01	2.81E-01	2.79E-01
6211.525	3.02E-01	2.98E-01	2.95E-01	2.92E-01	2.92E-01	2.90E-01
6211.475	3.13E-01	3.09E-01	3.06E-01	3.02E-01	3.02E-01	3.02E-01
6211.425	3.24E-01	3.22E-01	3.17E-01	3.14E-01	3.13E-01	3.13E-01
6211.375	3.35E-01	3.34E-01	3.29E-01	3.24E-01	3.22E-01	3.23E-01
6211.325	3.47E-01	3.47E-01	3.40E-01	3.33E-01	3.30E-01	3.33E-01
6211.275	3.60E-01	3.60E-01	3.53E-01	3.44E-01	3.42E-01	3.45E-01
6211.225	3.75E-01	3.76E-01	3.71E-01	3.63E-01	3.59E-01	3.59E-01
6211.175	3.89E-01	3.92E-01	3.90E-01	3.83E-01	3.78E-01	3.79E-01
6211.125	4.05E-01	4.08E-01	4.08E-01	4.03E-01	3.97E-01	3.99E-01
6211.075	4.20E-01	4.24E-01	4.26E-01	4.22E-01	4.18E-01	4.20E-01
6211.025	4.36E-01	4.40E-01	4.44E-01	4.41E-01	4.37E-01	4.37E-01
6210.975	4.51E-01	4.56E-01	4.60E-01	4.58E-01	4.53E-01	4.52E-01
6210.925	4.61E-01	4.67E-01	4.73E-01	4.72E-01	4.66E-01	4.64E-01
6210.875	4.78E-01	4.79E-01	4.89E-01	4.90E-01	4.86E-01	4.83E-01
6210.825	5.00E-01	5.02E-01	5.06E-01	5.09E-01	5.06E-01	5.01E-01
6210.775	5.26E-01	5.26E-01	5.29E-01	5.34E-01	5.29E-01	5.23E-01
6210.725	5.55E-01	5.57E-01	5.54E-01	5.59E-01	5.58E-01	5.51E-01
6210.675	5.88E-01	5.91E-01	5.87E-01	5.86E-01	5.91E-01	5.86E-01
6210.625	6.29E-01	6.36E-01	6.32E-01	6.24E-01	6.29E-01	6.04E-01
6210.575	6.82E-01	6.94E-01	6.91E-01	6.78E-01	6.78E-01	6.45E-01
6210.525	7.36E-01	7.53E-01	7.52E-01	7.37E-01	7.29E-01	6.98E-01
6210.475	7.79E-01	8.11E-01	8.22E-01	8.09E-01	7.81E-01	7.51E-01
6210.425	8.21E-01	8.66E-01	8.91E-01	8.78E-01	8.33E-01	8.11E-01
6210.375	8.69E-01	9.25E-01	9.58E-01	9.48E-01	9.03E-01	8.73E-01
6210.325	9.10E-01	9.75E-01	1.02E+00	1.02E+00	9.85E-01	9.66E-01
6210.275	9.47E-01	1.02E+00	1.08E+00	1.11E+00	1.11E+00	1.07E+00
6210.225	9.83E-01	1.08E+00	1.17E+00	1.23E+00	1.26E+00	1.22E+00
6210.175	1.01E+00	1.12E+00	1.26E+00	1.34E+00	1.39E+00	1.41E+00
6210.125	1.05E+00	1.18E+00	1.35E+00	1.46E+00	1.57E+00	1.63E+00
6210.075	1.15E+00	1.25E+00	1.42E+00	1.61E+00	1.74E+00	1.91E+00
6210.025	1.29E+00	1.34E+00	1.51E+00	1.78E+00	1.97E+00	2.15E+00
6209.975	1.40E+00	1.52E+00	1.64E+00	1.92E+00	2.34E+00	2.42E+00
6209.925	1.49E+00	1.64E+00	1.79E+00	2.05E+00	2.49E+00	2.79E+00
6209.875	1.60E+00	1.82E+00	1.96E+00	2.19E+00	2.50E+00	2.94E+00
6209.825	1.64E+00	1.97E+00	2.25E+00	3.31E+00	3.44E+00	3.53E+00
6209.775	1.60E+00	2.37E+00	3.28E+00	3.68E+00	3.62E+00	3.35E+00
6209.725	1.56E+00	2.66E+00	2.99E+00	3.48E+00	3.46E+00	3.46E+00
6209.675	1.49E+00	2.26E+00	2.44E+00	3.26E+00	3.75E+00	3.45E+00
6209.625	1.44E+00	1.77E+00	2.00E+00	2.59E+00	3.96E+00	3.50E+00
6209.575	1.30E+00	1.52E+00	1.67E+00	1.63E+00	1.60E+00	2.10E+00
6209.525	1.20E+00	1.30E+00	1.32E+00	1.26E+00	1.17E+00	1.32E+00
6209.475	1.07E+00	1.08E+00	1.06E+00	1.07E+00	1.05E+00	1.25E+00
6209.425	8.98E-01	9.10E-01	9.65E-01	1.04E+00	1.10E+00	1.22E+00
6209.375	7.83E-01	8.34E-01	9.15E-01	1.00E+00	1.09E+00	1.16E+00
6209.325	7.36E-01	8.03E-01	8.99E-01	9.71E-01	1.04E+00	1.07E+00
6209.275	7.02E-01	7.81E-01	8.54E-01	9.04E-01	9.52E-01	1.00E+00
6209.225	6.92E-01	7.41E-01	7.97E-01	8.63E-01	8.82E-01	9.07E-01
6209.175	6.68E-01	7.03E-01	7.46E-01	8.04E-01	8.03E-01	8.18E-01
6209.125	6.33E-01	6.64E-01	7.02E-01	7.32E-01	7.24E-01	7.32E-01
6209.075	6.04E-01	6.30E-01	6.61E-01	6.69E-01	6.65E-01	6.65E-01
6209.025	5.75E-01	6.01E-01	6.22E-01	6.31E-01	6.22E-01	6.08E-01
6208.975	5.50E-01	5.76E-01	5.89E-01	5.90E-01	5.81E-01	5.63E-01
6208.925	5.31E-01	5.49E-01	5.57E-01	5.59E-01	5.44E-01	5.25E-01
6208.875	5.08E-01	5.21E-01	5.29E-01	5.21E-01	5.04E-01	4.84E-01
6208.825	4.87E-01	4.97E-01	5.02E-01	4.78E-01	4.45E-01	4.26E-01
6208.775	4.68E-01	4.77E-01	4.79E-01	4.60E-01	4.25E-01	3.82E-01
6208.725	4.52E-01	4.58E-01	4.57E-01	4.34E-01	3.98E-01	3.62E-01
6208.675	4.31E-01	4.29E-01	4.18E-01	3.93E-01	3.63E-01	3.36E-01



APPENDIX B Dispersion Modelling

6208.625	4.01E-01	3.97E-01	3.75E-01	3.53E-01	3.20E-01	2.89E-01
6208.575	3.70E-01	3.69E-01	3.42E-01	3.16E-01	2.85E-01	2.73E-01
6208.525	3.43E-01	3.44E-01	3.21E-01	2.88E-01	2.67E-01	2.66E-01
6208.475	3.12E-01	3.17E-01	3.07E-01	2.75E-01	2.53E-01	2.50E-01
6208.425	2.85E-01	2.85E-01	2.82E-01	2.60E-01	2.39E-01	2.39E-01
6208.375	2.68E-01	2.62E-01	2.50E-01	2.43E-01	2.29E-01	2.29E-01
6208.325	2.50E-01	2.48E-01	2.34E-01	2.30E-01	2.21E-01	2.21E-01
6208.275	2.38E-01	2.33E-01	2.24E-01	2.19E-01	2.13E-01	2.13E-01
6208.225	2.24E-01	2.21E-01	2.13E-01	2.11E-01	2.06E-01	2.05E-01
6208.175	2.16E-01	2.13E-01	2.06E-01	2.04E-01	1.99E-01	1.97E-01
6208.125	2.08E-01	2.03E-01	1.99E-01	1.98E-01	1.92E-01	1.90E-01
6208.075	2.03E-01	1.98E-01	1.92E-01	1.93E-01	1.88E-01	1.84E-01
6208.025	1.97E-01	1.92E-01	1.86E-01	1.83E-01	1.83E-01	1.82E-01
6207.975	1.92E-01	1.87E-01	1.82E-01	1.79E-01	1.79E-01	1.77E-01
6207.925	1.88E-01	1.83E-01	1.80E-01	1.76E-01	1.74E-01	1.72E-01
6207.875	1.89E-01	1.86E-01	1.81E-01	1.79E-01	1.75E-01	1.69E-01
6207.825	1.86E-01	1.85E-01	1.84E-01	1.82E-01	1.72E-01	1.65E-01
6207.775	1.85E-01	1.84E-01	1.81E-01	1.79E-01	1.71E-01	1.64E-01
6207.725	1.79E-01	1.77E-01	1.75E-01	1.73E-01	1.67E-01	1.61E-01
6207.675	1.72E-01	1.72E-01	1.70E-01	1.68E-01	1.61E-01	1.58E-01
6207.625	1.66E-01	1.65E-01	1.65E-01	1.60E-01	1.56E-01	1.53E-01
6207.575	1.70E-01	1.61E-01	1.57E-01	1.55E-01	1.51E-01	1.49E-01
6207.525	1.72E-01	1.62E-01	1.54E-01	1.50E-01	1.48E-01	1.45E-01
6207.475	1.68E-01	1.58E-01	1.51E-01	1.47E-01	1.43E-01	1.42E-01
6207.425	1.59E-01	1.53E-01	1.46E-01	1.43E-01	1.41E-01	1.38E-01
6207.375	1.51E-01	1.45E-01	1.42E-01	1.39E-01	1.37E-01	1.35E-01

X (km): 616.275 616.325 616.375 616.425 616.475 616.525

Y (km)

6212.375	1.75E-01	1.76E-01	1.75E-01	1.75E-01	1.74E-01	1.73E-01
6212.325	1.80E-01	1.80E-01	1.80E-01	1.79E-01	1.78E-01	1.77E-01
6212.275	1.85E-01	1.85E-01	1.84E-01	1.84E-01	1.83E-01	1.82E-01
6212.225	1.90E-01	1.90E-01	1.89E-01	1.88E-01	1.88E-01	1.87E-01
6212.175	1.95E-01	1.95E-01	1.94E-01	1.93E-01	1.92E-01	1.91E-01
6212.125	2.00E-01	2.00E-01	1.99E-01	1.98E-01	1.97E-01	1.96E-01
6212.075	2.05E-01	2.05E-01	2.04E-01	2.03E-01	2.03E-01	2.01E-01
6212.025	2.11E-01	2.11E-01	2.10E-01	2.09E-01	2.08E-01	2.07E-01
6211.975	2.18E-01	2.17E-01	2.17E-01	2.15E-01	2.13E-01	2.12E-01
6211.925	2.24E-01	2.24E-01	2.23E-01	2.20E-01	2.19E-01	2.18E-01
6211.875	2.30E-01	2.30E-01	2.29E-01	2.26E-01	2.24E-01	2.23E-01
6211.825	2.36E-01	2.37E-01	2.36E-01	2.33E-01	2.30E-01	2.28E-01
6211.775	2.43E-01	2.44E-01	2.42E-01	2.41E-01	2.37E-01	2.34E-01
6211.725	2.50E-01	2.51E-01	2.50E-01	2.48E-01	2.45E-01	2.41E-01
6211.675	2.57E-01	2.59E-01	2.58E-01	2.56E-01	2.53E-01	2.50E-01
6211.625	2.65E-01	2.67E-01	2.65E-01	2.64E-01	2.61E-01	2.58E-01
6211.575	2.77E-01	2.72E-01	2.72E-01	2.72E-01	2.70E-01	2.67E-01
6211.525	2.90E-01	2.85E-01	2.77E-01	2.80E-01	2.78E-01	2.76E-01
6211.475	3.03E-01	2.98E-01	2.89E-01	2.86E-01	2.86E-01	2.83E-01
6211.425	3.15E-01	3.11E-01	3.02E-01	2.91E-01	2.92E-01	2.90E-01
6211.375	3.27E-01	3.25E-01	3.16E-01	3.02E-01	2.96E-01	2.97E-01
6211.325	3.39E-01	3.39E-01	3.30E-01	3.17E-01	3.06E-01	3.05E-01
6211.275	3.50E-01	3.49E-01	3.41E-01	3.30E-01	3.20E-01	3.13E-01
6211.225	3.57E-01	3.56E-01	3.54E-01	3.45E-01	3.37E-01	3.28E-01
6211.175	3.80E-01	3.80E-01	3.77E-01	3.68E-01	3.59E-01	3.49E-01
6211.125	4.03E-01	4.05E-01	4.01E-01	3.94E-01	3.83E-01	3.71E-01
6211.075	4.23E-01	4.25E-01	4.21E-01	4.14E-01	4.03E-01	3.92E-01
6211.025	4.41E-01	4.41E-01	4.37E-01	4.32E-01	4.23E-01	4.11E-01
6210.975	4.52E-01	4.54E-01	4.52E-01	4.49E-01	4.41E-01	4.31E-01
6210.925	4.68E-01	4.71E-01	4.72E-01	4.68E-01	4.61E-01	4.53E-01
6210.875	4.84E-01	4.88E-01	4.90E-01	4.91E-01	4.84E-01	4.77E-01
6210.825	5.07E-01	5.08E-01	5.14E-01	5.13E-01	5.09E-01	5.04E-01
6210.775	5.22E-01	5.28E-01	5.35E-01	5.42E-01	5.38E-01	5.32E-01
6210.725	5.47E-01	5.44E-01	5.57E-01	5.71E-01	5.69E-01	5.67E-01
6210.675	5.66E-01	5.69E-01	5.78E-01	5.93E-01	6.06E-01	6.05E-01
6210.625	6.02E-01	6.03E-01	6.06E-01	6.20E-01	6.37E-01	6.31E-01
6210.575	6.43E-01	6.29E-01	6.30E-01	6.52E-01	6.70E-01	6.43E-01
6210.525	6.89E-01	6.74E-01	6.74E-01	6.73E-01	6.71E-01	6.52E-01
6210.475	7.36E-01	7.33E-01	7.17E-01	7.11E-01	7.00E-01	6.75E-01
6210.425	7.99E-01	7.92E-01	7.76E-01	7.67E-01	7.49E-01	7.23E-01



APPENDIX B Dispersion Modelling

6210.375 8.71E-01 8.64E-01 8.53E-01 8.32E-01 8.12E-01 7.82E-01
6210.325 9.69E-01 9.57E-01 9.46E-01 9.17E-01 8.84E-01 8.37E-01
6210.275 1.09E+00 1.07E+00 1.06E+00 1.02E+00 9.65E-01 9.15E-01
6210.225 1.23E+00 1.21E+00 1.20E+00 1.14E+00 1.06E+00 1.01E+00
6210.175 1.41E+00 1.38E+00 1.35E+00 1.28E+00 1.18E+00 1.13E+00
6210.125 1.62E+00 1.59E+00 1.54E+00 1.44E+00 1.33E+00 1.29E+00
6210.075 1.93E+00 1.89E+00 1.76E+00 1.63E+00 1.57E+00 1.49E+00
6210.025 2.28E+00 2.24E+00 2.01E+00 1.95E+00 1.95E+00 1.78E+00
6209.975 2.66E+00 2.70E+00 2.50E+00 2.54E+00 2.60E+00 2.20E+00
6209.925 2.89E+00 3.25E+00 3.50E+00 3.85E+00 3.77E+00 3.20E+00
6209.875 2.87E+00 3.91E+00 5.62E+00 5.94E+00 5.07E+00 4.55E+00
6209.825 3.85E+00 4.98E+00 9.46E+00 1.04E+01 8.50E+00 6.75E+00
6209.775 4.29E+00 5.55E+00 1.31E+01 2.91E+01 1.38E+01 8.16E+00
6209.725 4.05E+00 4.53E+00 6.21E+00 7.69E+00 6.66E+00 5.80E+00
6209.675 3.66E+00 3.81E+00 4.65E+00 5.60E+00 4.59E+00 4.64E+00
6209.625 3.92E+00 4.17E+00 4.03E+00 4.42E+00 3.80E+00 3.61E+00
6209.575 3.93E+00 4.24E+00 3.83E+00 3.69E+00 3.50E+00 2.83E+00
6209.525 2.35E+00 2.92E+00 2.99E+00 2.88E+00 2.71E+00 2.08E+00
6209.475 1.67E+00 2.02E+00 2.13E+00 1.99E+00 1.87E+00 1.57E+00
6209.425 1.39E+00 1.58E+00 1.72E+00 1.50E+00 1.33E+00 1.13E+00
6209.375 1.21E+00 1.29E+00 1.41E+00 1.33E+00 1.18E+00 9.78E-01
6209.325 1.13E+00 1.10E+00 1.10E+00 1.02E+00 9.90E-01 8.82E-01
6209.275 1.07E+00 1.00E+00 9.13E-01 8.53E-01 8.56E-01 8.30E-01
6209.225 9.77E-01 9.53E-01 8.73E-01 8.24E-01 8.04E-01 8.28E-01
6209.175 8.74E-01 8.77E-01 8.38E-01 7.88E-01 7.48E-01 7.21E-01
6209.125 7.77E-01 7.61E-01 7.54E-01 7.09E-01 6.40E-01 5.88E-01
6209.075 6.89E-01 6.80E-01 6.58E-01 6.33E-01 5.79E-01 5.29E-01
6209.025 6.00E-01 5.98E-01 5.39E-01 5.07E-01 4.75E-01 4.96E-01
6208.975 5.44E-01 5.12E-01 4.57E-01 4.37E-01 4.37E-01 4.51E-01
6208.925 5.10E-01 4.87E-01 4.32E-01 4.15E-01 4.13E-01 4.28E-01
6208.875 4.86E-01 4.66E-01 4.39E-01 4.10E-01 3.92E-01 4.09E-01
6208.825 4.23E-01 3.88E-01 3.77E-01 3.68E-01 3.82E-01 3.85E-01
6208.775 3.45E-01 3.51E-01 3.56E-01 3.61E-01 3.66E-01 3.72E-01
6208.725 3.23E-01 3.27E-01 3.40E-01 3.41E-01 3.46E-01 3.50E-01
6208.675 3.09E-01 3.08E-01 3.13E-01 3.19E-01 3.34E-01 3.32E-01
6208.625 2.87E-01 3.02E-01 2.98E-01 3.08E-01 3.06E-01 3.20E-01
6208.575 2.83E-01 2.87E-01 2.86E-01 2.96E-01 2.93E-01 3.07E-01
6208.525 2.65E-01 2.63E-01 2.71E-01 2.73E-01 2.80E-01 2.85E-01
6208.475 2.56E-01 2.50E-01 2.63E-01 2.62E-01 2.78E-01 2.83E-01
6208.425 2.37E-01 2.47E-01 2.43E-01 2.50E-01 2.57E-01 2.68E-01
6208.375 2.34E-01 2.29E-01 2.38E-01 2.48E-01 2.56E-01 2.58E-01
6208.325 2.25E-01 2.27E-01 2.23E-01 2.35E-01 2.43E-01 2.49E-01
6208.275 2.16E-01 2.18E-01 2.18E-01 2.29E-01 2.29E-01 2.44E-01
6208.225 2.05E-01 2.09E-01 2.10E-01 2.13E-01 2.29E-01 2.34E-01
6208.175 1.97E-01 2.02E-01 2.03E-01 2.11E-01 2.22E-01 2.27E-01
6208.125 1.90E-01 1.92E-01 1.97E-01 2.04E-01 2.13E-01 2.21E-01
6208.075 1.84E-01 1.87E-01 1.91E-01 1.99E-01 2.07E-01 2.14E-01
6208.025 1.82E-01 1.81E-01 1.86E-01 1.93E-01 2.01E-01 2.07E-01
6207.975 1.74E-01 1.76E-01 1.81E-01 1.88E-01 1.95E-01 2.01E-01
6207.925 1.70E-01 1.72E-01 1.76E-01 1.82E-01 1.89E-01 1.95E-01
6207.875 1.66E-01 1.68E-01 1.72E-01 1.77E-01 1.84E-01 1.90E-01
6207.825 1.62E-01 1.64E-01 1.67E-01 1.72E-01 1.79E-01 1.84E-01
6207.775 1.61E-01 1.59E-01 1.63E-01 1.68E-01 1.74E-01 1.78E-01
6207.725 1.58E-01 1.58E-01 1.59E-01 1.64E-01 1.69E-01 1.73E-01
6207.675 1.54E-01 1.54E-01 1.55E-01 1.60E-01 1.64E-01 1.67E-01
6207.625 1.50E-01 1.51E-01 1.52E-01 1.55E-01 1.59E-01 1.61E-01
6207.575 1.47E-01 1.48E-01 1.48E-01 1.51E-01 1.54E-01 1.56E-01
6207.525 1.44E-01 1.44E-01 1.44E-01 1.47E-01 1.49E-01 1.50E-01
6207.475 1.41E-01 1.39E-01 1.41E-01 1.42E-01 1.44E-01 1.45E-01
6207.425 1.37E-01 1.36E-01 1.37E-01 1.38E-01 1.39E-01 1.40E-01
6207.375 1.34E-01 1.33E-01 1.33E-01 1.34E-01 1.35E-01 1.36E-01

X (km): 616.575 616.625 616.675 616.725 616.775 616.825

Y (km)

6212.375 1.71E-01 1.70E-01 1.69E-01 1.67E-01 1.67E-01 1.66E-01
6212.325 1.76E-01 1.75E-01 1.73E-01 1.72E-01 1.71E-01 1.70E-01
6212.275 1.81E-01 1.79E-01 1.78E-01 1.76E-01 1.75E-01 1.75E-01
6212.225 1.86E-01 1.84E-01 1.83E-01 1.80E-01 1.79E-01 1.78E-01
6212.175 1.90E-01 1.88E-01 1.87E-01 1.85E-01 1.84E-01 1.83E-01



APPENDIX B Dispersion Modelling

6212.125	1.95E-01	1.94E-01	1.92E-01	1.90E-01	1.89E-01	1.88E-01
6212.075	2.00E-01	1.99E-01	1.97E-01	1.95E-01	1.94E-01	1.93E-01
6212.025	2.06E-01	2.04E-01	2.02E-01	2.00E-01	1.99E-01	1.97E-01
6211.975	2.11E-01	2.10E-01	2.08E-01	2.05E-01	2.03E-01	2.02E-01
6211.925	2.17E-01	2.15E-01	2.13E-01	2.10E-01	2.08E-01	2.07E-01
6211.875	2.22E-01	2.20E-01	2.19E-01	2.16E-01	2.14E-01	2.13E-01
6211.825	2.27E-01	2.26E-01	2.24E-01	2.22E-01	2.19E-01	2.19E-01
6211.775	2.31E-01	2.31E-01	2.30E-01	2.27E-01	2.24E-01	2.25E-01
6211.725	2.38E-01	2.35E-01	2.33E-01	2.32E-01	2.29E-01	2.29E-01
6211.675	2.47E-01	2.41E-01	2.37E-01	2.36E-01	2.33E-01	2.31E-01
6211.625	2.56E-01	2.52E-01	2.49E-01	2.45E-01	2.41E-01	2.38E-01
6211.575	2.65E-01	2.62E-01	2.60E-01	2.58E-01	2.55E-01	2.49E-01
6211.525	2.73E-01	2.71E-01	2.69E-01	2.68E-01	2.66E-01	2.60E-01
6211.475	2.81E-01	2.80E-01	2.78E-01	2.77E-01	2.74E-01	2.69E-01
6211.425	2.90E-01	2.86E-01	2.85E-01	2.83E-01	2.80E-01	2.76E-01
6211.375	2.95E-01	2.93E-01	2.90E-01	2.89E-01	2.87E-01	2.84E-01
6211.325	3.02E-01	2.97E-01	2.96E-01	2.94E-01	2.94E-01	2.91E-01
6211.275	3.08E-01	2.97E-01	2.98E-01	2.98E-01	2.99E-01	2.94E-01
6211.225	3.21E-01	3.10E-01	3.06E-01	3.04E-01	3.05E-01	3.00E-01
6211.175	3.43E-01	3.37E-01	3.30E-01	3.18E-01	3.13E-01	3.09E-01
6211.125	3.63E-01	3.55E-01	3.46E-01	3.33E-01	3.27E-01	3.22E-01
6211.075	3.81E-01	3.72E-01	3.64E-01	3.48E-01	3.40E-01	3.36E-01
6211.025	4.00E-01	3.90E-01	3.81E-01	3.71E-01	3.63E-01	3.59E-01
6210.975	4.19E-01	4.10E-01	4.01E-01	3.94E-01	3.86E-01	3.77E-01
6210.925	4.43E-01	4.33E-01	4.23E-01	4.14E-01	4.04E-01	3.93E-01
6210.875	4.70E-01	4.57E-01	4.46E-01	4.30E-01	4.13E-01	4.00E-01
6210.825	4.97E-01	4.85E-01	4.67E-01	4.38E-01	4.19E-01	3.99E-01
6210.775	5.23E-01	5.11E-01	4.84E-01	4.52E-01	4.21E-01	3.94E-01
6210.725	5.54E-01	5.36E-01	4.97E-01	4.59E-01	4.32E-01	4.01E-01
6210.675	5.85E-01	5.44E-01	5.03E-01	4.75E-01	4.43E-01	4.11E-01
6210.625	5.94E-01	5.42E-01	5.20E-01	4.89E-01	4.55E-01	4.21E-01
6210.575	5.95E-01	5.70E-01	5.49E-01	5.03E-01	4.72E-01	4.40E-01
6210.525	6.15E-01	5.97E-01	5.72E-01	5.26E-01	4.86E-01	4.57E-01
6210.475	6.54E-01	6.33E-01	5.99E-01	5.58E-01	5.20E-01	4.79E-01
6210.425	6.98E-01	6.74E-01	6.24E-01	5.82E-01	5.49E-01	5.17E-01
6210.375	7.43E-01	7.17E-01	6.62E-01	6.12E-01	5.76E-01	5.55E-01
6210.325	8.06E-01	7.59E-01	7.02E-01	6.54E-01	6.17E-01	5.99E-01
6210.275	8.98E-01	8.21E-01	7.52E-01	6.96E-01	6.78E-01	6.72E-01
6210.225	9.87E-01	8.84E-01	8.08E-01	7.55E-01	7.49E-01	7.49E-01
6210.175	1.07E+00	9.51E-01	8.75E-01	8.60E-01	8.59E-01	8.55E-01
6210.125	1.18E+00	1.04E+00	1.00E+00	1.02E+00	1.04E+00	9.70E-01
6210.075	1.30E+00	1.19E+00	1.19E+00	1.18E+00	1.14E+00	1.07E+00
6210.025	1.53E+00	1.45E+00	1.40E+00	1.34E+00	1.33E+00	1.24E+00
6209.975	1.99E+00	1.82E+00	1.63E+00	1.52E+00	1.51E+00	1.43E+00
6209.925	3.06E+00	2.40E+00	1.99E+00	1.87E+00	1.80E+00	1.58E+00
6209.875	4.40E+00	3.53E+00	2.63E+00	2.28E+00	2.00E+00	1.63E+00
6209.825	5.93E+00	5.02E+00	3.27E+00	2.47E+00	1.97E+00	1.74E+00
6209.775	6.11E+00	5.17E+00	3.21E+00	2.34E+00	1.98E+00	1.81E+00
6209.725	5.35E+00	4.73E+00	2.98E+00	2.42E+00	1.97E+00	1.71E+00
6209.675	4.32E+00	3.62E+00	2.59E+00	2.37E+00	1.96E+00	1.70E+00
6209.625	3.39E+00	2.64E+00	2.18E+00	1.93E+00	1.66E+00	1.57E+00
6209.575	2.52E+00	2.10E+00	1.82E+00	1.53E+00	1.46E+00	1.40E+00
6209.525	1.67E+00	1.57E+00	1.51E+00	1.41E+00	1.29E+00	1.30E+00
6209.475	1.27E+00	1.27E+00	1.29E+00	1.28E+00	1.20E+00	1.14E+00
6209.425	1.05E+00	1.06E+00	1.13E+00	1.14E+00	1.13E+00	1.06E+00
6209.375	9.34E-01	9.21E-01	9.36E-01	1.01E+00	1.03E+00	9.96E-01
6209.325	8.35E-01	7.98E-01	8.10E-01	8.63E-01	9.20E-01	9.41E-01
6209.275	7.71E-01	7.28E-01	7.17E-01	7.69E-01	8.07E-01	8.40E-01
6209.225	7.39E-01	6.82E-01	6.61E-01	6.68E-01	7.24E-01	7.66E-01
6209.175	6.64E-01	6.34E-01	6.32E-01	6.41E-01	6.40E-01	6.73E-01
6209.125	5.98E-01	5.97E-01	5.85E-01	5.90E-01	5.99E-01	6.30E-01
6209.075	5.65E-01	5.65E-01	5.60E-01	5.67E-01	5.78E-01	5.86E-01
6209.025	5.08E-01	5.25E-01	5.06E-01	5.27E-01	5.34E-01	5.49E-01
6208.975	4.79E-01	4.76E-01	4.83E-01	4.94E-01	4.94E-01	5.07E-01
6208.925	4.36E-01	4.44E-01	4.59E-01	4.54E-01	4.61E-01	4.75E-01
6208.875	4.17E-01	4.15E-01	4.30E-01	4.28E-01	4.34E-01	4.43E-01
6208.825	3.91E-01	4.00E-01	3.98E-01	4.01E-01	4.08E-01	4.17E-01
6208.775	3.72E-01	3.73E-01	3.79E-01	3.77E-01	3.85E-01	3.93E-01
6208.725	3.56E-01	3.52E-01	3.54E-01	3.58E-01	3.63E-01	3.70E-01
6208.675	3.39E-01	3.41E-01	3.38E-01	3.40E-01	3.42E-01	3.51E-01
6208.625	3.21E-01	3.27E-01	3.23E-01	3.22E-01	3.26E-01	3.35E-01



APPENDIX B Dispersion Modelling

6208.575	3.11E-01	3.13E-01	3.09E-01	3.09E-01	3.14E-01	3.22E-01
6208.525	2.95E-01	2.96E-01	2.97E-01	3.00E-01	3.04E-01	3.09E-01
6208.475	2.83E-01	2.85E-01	2.88E-01	2.91E-01	2.94E-01	2.96E-01
6208.425	2.65E-01	2.76E-01	2.80E-01	2.84E-01	2.85E-01	2.85E-01
6208.375	2.62E-01	2.67E-01	2.72E-01	2.76E-01	2.76E-01	2.74E-01
6208.325	2.54E-01	2.60E-01	2.65E-01	2.67E-01	2.67E-01	2.64E-01
6208.275	2.47E-01	2.52E-01	2.56E-01	2.59E-01	2.58E-01	2.55E-01
6208.225	2.40E-01	2.45E-01	2.48E-01	2.51E-01	2.50E-01	2.45E-01
6208.175	2.33E-01	2.37E-01	2.41E-01	2.42E-01	2.41E-01	2.36E-01
6208.125	2.25E-01	2.30E-01	2.33E-01	2.34E-01	2.32E-01	2.27E-01
6208.075	2.18E-01	2.23E-01	2.25E-01	2.26E-01	2.23E-01	2.18E-01
6208.025	2.12E-01	2.16E-01	2.18E-01	2.17E-01	2.15E-01	2.10E-01
6207.975	2.06E-01	2.09E-01	2.10E-01	2.09E-01	2.06E-01	2.03E-01
6207.925	1.99E-01	2.01E-01	2.02E-01	2.01E-01	1.99E-01	1.96E-01
6207.875	1.93E-01	1.94E-01	1.94E-01	1.93E-01	1.92E-01	1.89E-01
6207.825	1.87E-01	1.87E-01	1.87E-01	1.86E-01	1.85E-01	1.83E-01
6207.775	1.80E-01	1.80E-01	1.80E-01	1.80E-01	1.79E-01	1.77E-01
6207.725	1.74E-01	1.74E-01	1.74E-01	1.74E-01	1.73E-01	1.71E-01
6207.675	1.68E-01	1.67E-01	1.67E-01	1.68E-01	1.67E-01	1.66E-01
6207.625	1.62E-01	1.62E-01	1.62E-01	1.62E-01	1.62E-01	1.60E-01
6207.575	1.56E-01	1.56E-01	1.57E-01	1.57E-01	1.57E-01	1.55E-01
6207.525	1.51E-01	1.51E-01	1.52E-01	1.52E-01	1.52E-01	1.50E-01
6207.475	1.46E-01	1.46E-01	1.47E-01	1.48E-01	1.47E-01	1.46E-01
6207.425	1.41E-01	1.42E-01	1.43E-01	1.43E-01	1.42E-01	1.41E-01
6207.375	1.37E-01	1.38E-01	1.38E-01	1.39E-01	1.38E-01	1.37E-01

X (km): 616.875 616.925 616.975 617.025 617.075 617.125

Y (km)

6212.375	1.65E-01	1.64E-01	1.63E-01	1.61E-01	1.60E-01	1.60E-01
6212.325	1.69E-01	1.68E-01	1.67E-01	1.65E-01	1.65E-01	1.65E-01
6212.275	1.74E-01	1.72E-01	1.71E-01	1.70E-01	1.70E-01	1.69E-01
6212.225	1.77E-01	1.76E-01	1.75E-01	1.74E-01	1.74E-01	1.73E-01
6212.175	1.82E-01	1.80E-01	1.79E-01	1.79E-01	1.79E-01	1.78E-01
6212.125	1.87E-01	1.86E-01	1.85E-01	1.85E-01	1.84E-01	1.82E-01
6212.075	1.91E-01	1.91E-01	1.90E-01	1.90E-01	1.88E-01	1.86E-01
6212.025	1.96E-01	1.96E-01	1.95E-01	1.95E-01	1.93E-01	1.90E-01
6211.975	2.02E-01	2.01E-01	2.01E-01	2.00E-01	1.98E-01	1.94E-01
6211.925	2.07E-01	2.07E-01	2.06E-01	2.05E-01	2.01E-01	1.97E-01
6211.875	2.14E-01	2.13E-01	2.12E-01	2.10E-01	2.06E-01	2.01E-01
6211.825	2.20E-01	2.19E-01	2.18E-01	2.15E-01	2.11E-01	2.05E-01
6211.775	2.25E-01	2.24E-01	2.22E-01	2.20E-01	2.15E-01	2.10E-01
6211.725	2.28E-01	2.28E-01	2.27E-01	2.24E-01	2.20E-01	2.13E-01
6211.675	2.31E-01	2.31E-01	2.30E-01	2.28E-01	2.23E-01	2.17E-01
6211.625	2.36E-01	2.35E-01	2.34E-01	2.31E-01	2.26E-01	2.19E-01
6211.575	2.43E-01	2.40E-01	2.38E-01	2.34E-01	2.29E-01	2.22E-01
6211.525	2.53E-01	2.47E-01	2.42E-01	2.37E-01	2.32E-01	2.25E-01
6211.475	2.62E-01	2.57E-01	2.48E-01	2.38E-01	2.33E-01	2.28E-01
6211.425	2.71E-01	2.63E-01	2.53E-01	2.44E-01	2.37E-01	2.30E-01
6211.375	2.78E-01	2.68E-01	2.57E-01	2.48E-01	2.40E-01	2.33E-01
6211.325	2.82E-01	2.71E-01	2.63E-01	2.55E-01	2.45E-01	2.36E-01
6211.275	2.85E-01	2.78E-01	2.63E-01	2.53E-01	2.42E-01	2.32E-01
6211.225	2.94E-01	2.80E-01	2.70E-01	2.57E-01	2.45E-01	2.35E-01
6211.175	3.04E-01	2.95E-01	2.84E-01	2.64E-01	2.50E-01	2.39E-01
6211.125	3.17E-01	3.07E-01	2.93E-01	2.78E-01	2.57E-01	2.44E-01
6211.075	3.31E-01	3.19E-01	3.02E-01	2.85E-01	2.63E-01	2.49E-01
6211.025	3.48E-01	3.32E-01	3.10E-01	2.91E-01	2.68E-01	2.55E-01
6210.975	3.64E-01	3.41E-01	3.15E-01	2.95E-01	2.75E-01	2.61E-01
6210.925	3.75E-01	3.41E-01	3.18E-01	2.95E-01	2.80E-01	2.68E-01
6210.875	3.73E-01	3.45E-01	3.18E-01	3.01E-01	2.87E-01	2.77E-01
6210.825	3.77E-01	3.44E-01	3.25E-01	3.08E-01	2.94E-01	2.87E-01
6210.775	3.71E-01	3.50E-01	3.30E-01	3.16E-01	3.05E-01	3.00E-01
6210.725	3.78E-01	3.56E-01	3.39E-01	3.27E-01	3.19E-01	3.16E-01
6210.675	3.86E-01	3.66E-01	3.51E-01	3.42E-01	3.36E-01	3.35E-01
6210.625	3.98E-01	3.79E-01	3.66E-01	3.60E-01	3.58E-01	3.59E-01
6210.575	4.13E-01	3.94E-01	3.84E-01	3.82E-01	3.82E-01	3.83E-01
6210.525	4.35E-01	4.18E-01	4.12E-01	4.11E-01	4.12E-01	4.10E-01
6210.475	4.54E-01	4.41E-01	4.37E-01	4.46E-01	4.44E-01	4.35E-01
6210.425	4.92E-01	4.83E-01	4.80E-01	4.83E-01	4.69E-01	4.56E-01
6210.375	5.36E-01	5.31E-01	5.26E-01	5.10E-01	4.94E-01	4.78E-01



APPENDIX B Dispersion Modelling

6210.325	5.94E-01	5.87E-01	5.69E-01	5.39E-01	5.16E-01	4.99E-01
6210.275	6.66E-01	6.44E-01	6.05E-01	5.75E-01	5.57E-01	5.42E-01
6210.225	7.25E-01	6.85E-01	6.41E-01	6.16E-01	5.99E-01	5.73E-01
6210.175	7.89E-01	7.40E-01	7.05E-01	6.75E-01	6.39E-01	6.35E-01
6210.125	9.30E-01	8.19E-01	7.66E-01	7.42E-01	7.08E-01	6.87E-01
6210.075	1.03E+00	9.24E-01	8.40E-01	8.07E-01	7.73E-01	7.58E-01
6210.025	1.16E+00	9.99E-01	9.49E-01	9.11E-01	8.65E-01	8.30E-01
6209.975	1.27E+00	1.09E+00	1.05E+00	1.02E+00	9.62E-01	9.14E-01
6209.925	1.32E+00	1.24E+00	1.18E+00	1.11E+00	1.07E+00	1.00E+00
6209.875	1.47E+00	1.36E+00	1.29E+00	1.22E+00	1.16E+00	1.11E+00
6209.825	1.60E+00	1.51E+00	1.41E+00	1.33E+00	1.27E+00	1.22E+00
6209.775	1.63E+00	1.56E+00	1.45E+00	1.40E+00	1.34E+00	1.31E+00
6209.725	1.60E+00	1.55E+00	1.46E+00	1.43E+00	1.39E+00	1.37E+00
6209.675	1.60E+00	1.49E+00	1.48E+00	1.44E+00	1.42E+00	1.41E+00
6209.625	1.54E+00	1.43E+00	1.41E+00	1.41E+00	1.43E+00	1.45E+00
6209.575	1.38E+00	1.38E+00	1.36E+00	1.36E+00	1.40E+00	1.45E+00
6209.525	1.24E+00	1.27E+00	1.27E+00	1.30E+00	1.36E+00	1.45E+00
6209.475	1.15E+00	1.13E+00	1.17E+00	1.21E+00	1.29E+00	1.42E+00
6209.425	1.04E+00	1.06E+00	1.10E+00	1.15E+00	1.23E+00	1.36E+00
6209.375	1.01E+00	9.98E-01	1.02E+00	1.08E+00	1.18E+00	1.30E+00
6209.325	9.40E-01	9.51E-01	9.72E-01	1.02E+00	1.10E+00	1.24E+00
6209.275	8.67E-01	8.99E-01	9.33E-01	9.79E-01	1.05E+00	1.17E+00
6209.225	7.88E-01	8.23E-01	8.66E-01	9.16E-01	9.88E-01	1.11E+00
6209.175	7.21E-01	7.61E-01	8.03E-01	8.53E-01	9.25E-01	1.03E+00
6209.125	6.62E-01	6.97E-01	7.38E-01	7.93E-01	8.55E-01	9.24E-01
6209.075	6.09E-01	6.41E-01	6.79E-01	7.27E-01	7.82E-01	8.37E-01
6209.025	5.63E-01	5.90E-01	6.29E-01	6.67E-01	7.14E-01	7.48E-01
6208.975	5.27E-01	5.52E-01	5.80E-01	6.17E-01	6.44E-01	6.84E-01
6208.925	4.91E-01	5.11E-01	5.39E-01	5.65E-01	5.95E-01	6.33E-01
6208.875	4.57E-01	4.75E-01	4.96E-01	5.23E-01	5.53E-01	5.83E-01
6208.825	4.28E-01	4.41E-01	4.62E-01	4.87E-01	5.14E-01	5.29E-01
6208.775	4.01E-01	4.14E-01	4.33E-01	4.52E-01	4.75E-01	4.78E-01
6208.725	3.80E-01	3.94E-01	4.06E-01	4.21E-01	4.33E-01	4.34E-01
6208.675	3.63E-01	3.74E-01	3.82E-01	3.92E-01	3.93E-01	3.95E-01
6208.625	3.47E-01	3.55E-01	3.61E-01	3.65E-01	3.60E-01	3.61E-01
6208.575	3.30E-01	3.36E-01	3.41E-01	3.38E-01	3.33E-01	3.33E-01
6208.525	3.14E-01	3.19E-01	3.20E-01	3.15E-01	3.11E-01	3.09E-01
6208.475	2.99E-01	3.02E-01	3.00E-01	2.94E-01	2.91E-01	2.88E-01
6208.425	2.86E-01	2.85E-01	2.81E-01	2.76E-01	2.73E-01	2.71E-01
6208.375	2.73E-01	2.70E-01	2.65E-01	2.61E-01	2.57E-01	2.55E-01
6208.325	2.61E-01	2.55E-01	2.50E-01	2.46E-01	2.43E-01	2.42E-01
6208.275	2.49E-01	2.42E-01	2.38E-01	2.33E-01	2.30E-01	2.30E-01
6208.225	2.38E-01	2.31E-01	2.26E-01	2.22E-01	2.19E-01	2.19E-01
6208.175	2.29E-01	2.22E-01	2.16E-01	2.11E-01	2.09E-01	2.09E-01
6208.125	2.20E-01	2.13E-01	2.07E-01	2.02E-01	2.00E-01	2.01E-01
6208.075	2.12E-01	2.06E-01	1.99E-01	1.94E-01	1.92E-01	1.93E-01
6208.025	2.05E-01	1.98E-01	1.92E-01	1.87E-01	1.85E-01	1.85E-01
6207.975	1.98E-01	1.92E-01	1.85E-01	1.81E-01	1.79E-01	1.78E-01
6207.925	1.92E-01	1.85E-01	1.79E-01	1.75E-01	1.73E-01	1.72E-01
6207.875	1.85E-01	1.80E-01	1.74E-01	1.70E-01	1.68E-01	1.67E-01
6207.825	1.79E-01	1.74E-01	1.69E-01	1.66E-01	1.64E-01	1.62E-01
6207.775	1.74E-01	1.69E-01	1.65E-01	1.62E-01	1.59E-01	1.57E-01
6207.725	1.68E-01	1.64E-01	1.60E-01	1.58E-01	1.56E-01	1.53E-01
6207.675	1.63E-01	1.60E-01	1.57E-01	1.54E-01	1.52E-01	1.49E-01
6207.625	1.58E-01	1.55E-01	1.53E-01	1.51E-01	1.48E-01	1.46E-01
6207.575	1.53E-01	1.51E-01	1.49E-01	1.47E-01	1.45E-01	1.42E-01
6207.525	1.49E-01	1.47E-01	1.46E-01	1.44E-01	1.42E-01	1.39E-01
6207.475	1.44E-01	1.44E-01	1.43E-01	1.41E-01	1.39E-01	1.36E-01
6207.425	1.40E-01	1.40E-01	1.39E-01	1.38E-01	1.36E-01	1.33E-01
6207.375	1.37E-01	1.37E-01	1.36E-01	1.35E-01	1.33E-01	1.31E-01

X (km): 617.175 617.225 617.275 617.325 617.375

Y (km)

6212.375	1.60E-01	1.58E-01	1.56E-01	1.52E-01	1.47E-01
6212.325	1.63E-01	1.61E-01	1.59E-01	1.55E-01	1.51E-01
6212.275	1.68E-01	1.65E-01	1.62E-01	1.59E-01	1.54E-01
6212.225	1.71E-01	1.68E-01	1.65E-01	1.61E-01	1.56E-01
6212.175	1.75E-01	1.72E-01	1.68E-01	1.62E-01	1.57E-01
6212.125	1.79E-01	1.75E-01	1.69E-01	1.63E-01	1.58E-01



APPENDIX B Dispersion Modelling

6212.075	1.82E-01	1.76E-01	1.70E-01	1.64E-01	1.59E-01
6212.025	1.85E-01	1.79E-01	1.72E-01	1.66E-01	1.60E-01
6211.975	1.88E-01	1.81E-01	1.74E-01	1.68E-01	1.59E-01
6211.925	1.91E-01	1.84E-01	1.77E-01	1.72E-01	1.62E-01
6211.875	1.93E-01	1.86E-01	1.79E-01	1.70E-01	1.64E-01
6211.825	1.97E-01	1.89E-01	1.83E-01	1.77E-01	1.70E-01
6211.775	2.03E-01	1.95E-01	1.88E-01	1.81E-01	1.75E-01
6211.725	2.07E-01	2.00E-01	1.92E-01	1.84E-01	1.76E-01
6211.675	2.10E-01	2.03E-01	1.93E-01	1.86E-01	1.75E-01
6211.625	2.13E-01	2.05E-01	1.95E-01	1.84E-01	1.75E-01
6211.575	2.15E-01	2.07E-01	1.99E-01	1.89E-01	1.76E-01
6211.525	2.18E-01	2.11E-01	2.02E-01	1.94E-01	1.79E-01
6211.475	2.22E-01	2.15E-01	2.04E-01	1.90E-01	1.76E-01
6211.425	2.24E-01	2.14E-01	2.00E-01	1.90E-01	1.77E-01
6211.375	2.25E-01	2.13E-01	2.02E-01	1.88E-01	1.79E-01
6211.325	2.25E-01	2.15E-01	1.99E-01	1.90E-01	1.83E-01
6211.275	2.22E-01	2.12E-01	2.01E-01	1.93E-01	1.85E-01
6211.225	2.25E-01	2.14E-01	2.04E-01	1.95E-01	1.89E-01
6211.175	2.28E-01	2.18E-01	2.07E-01	2.00E-01	1.95E-01
6211.125	2.33E-01	2.20E-01	2.12E-01	2.06E-01	2.03E-01
6211.075	2.38E-01	2.26E-01	2.19E-01	2.14E-01	2.12E-01
6211.025	2.44E-01	2.35E-01	2.27E-01	2.24E-01	2.22E-01
6210.975	2.51E-01	2.42E-01	2.38E-01	2.36E-01	2.35E-01
6210.925	2.60E-01	2.52E-01	2.49E-01	2.49E-01	2.49E-01
6210.875	2.69E-01	2.65E-01	2.64E-01	2.62E-01	2.63E-01
6210.825	2.82E-01	2.80E-01	2.78E-01	2.79E-01	2.78E-01
6210.775	2.99E-01	2.96E-01	2.96E-01	2.94E-01	2.93E-01
6210.725	3.16E-01	3.14E-01	3.14E-01	3.11E-01	3.03E-01
6210.675	3.36E-01	3.36E-01	3.29E-01	3.23E-01	3.15E-01
6210.625	3.57E-01	3.54E-01	3.46E-01	3.36E-01	3.24E-01
6210.575	3.81E-01	3.73E-01	3.60E-01	3.46E-01	3.37E-01
6210.525	4.02E-01	3.88E-01	3.75E-01	3.61E-01	3.53E-01
6210.475	4.20E-01	4.05E-01	3.89E-01	3.79E-01	3.71E-01
6210.425	4.40E-01	4.22E-01	4.10E-01	4.01E-01	3.94E-01
6210.375	4.63E-01	4.47E-01	4.35E-01	4.26E-01	4.19E-01
6210.325	4.92E-01	4.76E-01	4.66E-01	4.55E-01	4.46E-01
6210.275	5.27E-01	5.11E-01	4.99E-01	4.89E-01	4.77E-01
6210.225	5.65E-01	5.53E-01	5.38E-01	5.24E-01	5.13E-01
6210.175	6.14E-01	5.96E-01	5.81E-01	5.65E-01	5.52E-01
6210.125	6.67E-01	6.47E-01	6.29E-01	6.11E-01	5.93E-01
6210.075	7.28E-01	7.08E-01	6.83E-01	6.59E-01	6.41E-01
6210.025	7.99E-01	7.71E-01	7.42E-01	7.17E-01	6.94E-01
6209.975	8.74E-01	8.38E-01	8.06E-01	7.76E-01	7.48E-01
6209.925	9.53E-01	9.16E-01	8.76E-01	8.42E-01	8.11E-01
6209.875	1.05E+00	1.00E+00	9.59E-01	9.21E-01	8.84E-01
6209.825	1.16E+00	1.10E+00	1.05E+00	1.01E+00	9.62E-01
6209.775	1.26E+00	1.19E+00	1.14E+00	1.09E+00	1.04E+00
6209.725	1.37E+00	1.31E+00	1.24E+00	1.19E+00	1.13E+00
6209.675	1.45E+00	1.46E+00	1.37E+00	1.32E+00	1.22E+00
6209.625	1.49E+00	1.63E+00	1.57E+00	1.49E+00	1.28E+00
6209.575	1.51E+00	1.67E+00	1.88E+00	1.60E+00	1.41E+00
6209.525	1.54E+00	1.64E+00	1.64E+00	1.27E+00	1.76E+00
6209.475	1.55E+00	1.62E+00	1.39E+00	1.45E+00	2.11E+00
6209.425	1.53E+00	1.60E+00	1.53E+00	1.62E+00	1.65E+00
6209.375	1.50E+00	1.72E+00	1.77E+00	1.76E+00	1.63E+00
6209.325	1.47E+00	1.80E+00	2.15E+00	2.11E+00	1.72E+00
6209.275	1.41E+00	1.73E+00	2.71E+00	3.21E+00	2.33E+00
6209.225	1.30E+00	1.62E+00	2.50E+00	4.62E+00	2.89E+00
6209.175	1.15E+00	1.34E+00	1.63E+00	1.65E+00	1.62E+00
6209.125	1.01E+00	1.09E+00	1.24E+00	1.18E+00	1.09E+00
6209.075	8.82E-01	9.75E-01	9.93E-01	9.48E-01	8.91E-01
6209.025	8.04E-01	8.54E-01	8.36E-01	8.02E-01	7.70E-01
6208.975	7.33E-01	7.45E-01	7.30E-01	7.01E-01	6.82E-01
6208.925	6.55E-01	6.55E-01	6.47E-01	6.24E-01	6.13E-01
6208.875	5.86E-01	5.83E-01	5.78E-01	5.60E-01	5.54E-01
6208.825	5.29E-01	5.26E-01	5.23E-01	5.06E-01	5.04E-01
6208.775	4.82E-01	4.80E-01	4.76E-01	4.62E-01	4.60E-01
6208.725	4.38E-01	4.40E-01	4.38E-01	4.25E-01	4.24E-01
6208.675	3.99E-01	4.05E-01	4.03E-01	3.94E-01	3.93E-01
6208.625	3.65E-01	3.72E-01	3.72E-01	3.65E-01	3.65E-01
6208.575	3.35E-01	3.42E-01	3.42E-01	3.38E-01	3.41E-01



APPENDIX B Dispersion Modelling

6208.525	3.11E-01	3.16E-01	3.16E-01	3.13E-01	3.17E-01
6208.475	2.90E-01	2.93E-01	2.92E-01	2.90E-01	2.95E-01
6208.425	2.72E-01	2.74E-01	2.71E-01	2.69E-01	2.74E-01
6208.375	2.57E-01	2.57E-01	2.53E-01	2.51E-01	2.55E-01
6208.325	2.44E-01	2.43E-01	2.38E-01	2.35E-01	2.38E-01
6208.275	2.31E-01	2.30E-01	2.25E-01	2.21E-01	2.23E-01
6208.225	2.20E-01	2.18E-01	2.13E-01	2.09E-01	2.11E-01
6208.175	2.10E-01	2.07E-01	2.02E-01	1.99E-01	1.99E-01
6208.125	2.01E-01	1.98E-01	1.93E-01	1.89E-01	1.90E-01
6208.075	1.92E-01	1.89E-01	1.84E-01	1.81E-01	1.81E-01
6208.025	1.84E-01	1.81E-01	1.76E-01	1.73E-01	1.73E-01
6207.975	1.77E-01	1.74E-01	1.69E-01	1.66E-01	1.65E-01
6207.925	1.71E-01	1.67E-01	1.62E-01	1.59E-01	1.59E-01
6207.875	1.65E-01	1.61E-01	1.56E-01	1.53E-01	1.53E-01
6207.825	1.59E-01	1.55E-01	1.51E-01	1.48E-01	1.47E-01
6207.775	1.54E-01	1.50E-01	1.45E-01	1.43E-01	1.42E-01
6207.725	1.50E-01	1.45E-01	1.41E-01	1.38E-01	1.37E-01
6207.675	1.46E-01	1.41E-01	1.36E-01	1.33E-01	1.33E-01
6207.625	1.42E-01	1.37E-01	1.32E-01	1.29E-01	1.29E-01
6207.575	1.39E-01	1.34E-01	1.29E-01	1.26E-01	1.25E-01
6207.525	1.35E-01	1.31E-01	1.26E-01	1.23E-01	1.21E-01
6207.475	1.32E-01	1.28E-01	1.23E-01	1.19E-01	1.18E-01
6207.425	1.30E-01	1.25E-01	1.20E-01	1.17E-01	1.15E-01
6207.375	1.27E-01	1.22E-01	1.17E-01	1.14E-01	1.13E-01

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 1

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	2.66E+01	24,28/06/08	(616275, 6209725, 0.0)
2	2.60E+01	24,13/07/08	(616325, 6209775, 0.0)
3	2.54E+01	24,31/07/08	(616325, 6209775, 0.0)
4	2.49E+01	24,07/11/08	(616325, 6209825, 0.0)
5	2.47E+01	24,14/09/08	(616325, 6209775, 0.0)
6	2.32E+01	24,09/07/08	(616325, 6209775, 0.0)
7	2.26E+01	24,26/10/08	(616425, 6209825, 0.0)
8	2.25E+01	24,18/11/08	(616075, 6209775, 0.0)
9	2.10E+01	24,17/05/08	(616375, 6209825, 0.0)
10	2.08E+01	24,19/01/08	(616275, 6209775, 0.0)
11	2.03E+01	24,30/04/08	(616325, 6209725, 0.0)
12	2.00E+01	24,05/06/08	(616075, 6209775, 0.0)
13	2.00E+01	24,27/03/08	(616075, 6209775, 0.0)
14	1.95E+01	24,25/09/08	(616275, 6209775, 0.0)
15	1.95E+01	24,28/10/08	(616025, 6209725, 0.0)
16	1.93E+01	24,20/11/08	(616275, 6209775, 0.0)
17	1.92E+01	24,11/03/08	(616125, 6209775, 0.0)
18	1.90E+01	24,04/02/08	(616175, 6209825, 0.0)
19	1.87E+01	24,24/05/08	(616225, 6209675, 0.0)
20	1.85E+01	24,14/07/08	(616375, 6209875, 0.0)
21	1.85E+01	24,08/02/08	(616075, 6209775, 0.0)
22	1.84E+01	24,16/07/08	(616275, 6209725, 0.0)
23	1.81E+01	24,07/02/08	(616125, 6209775, 0.0)
24	1.81E+01	24,13/04/08	(616225, 6209825, 0.0)
25	1.80E+01	24,01/01/08	(616275, 6209925, 0.0)
26	1.77E+01	24,05/07/08	(616325, 6209675, 0.0)
27	1.76E+01	24,06/06/08	(616175, 6209925, 0.0)
28	1.76E+01	24,04/06/08	(616075, 6209775, 0.0)
29	1.73E+01	24,19/06/08	(616175, 6209825, 0.0)
30	1.72E+01	24,20/01/08	(616075, 6209775, 0.0)
31	1.70E+01	24,09/02/08	(616075, 6209775, 0.0)
32	1.70E+01	24,15/05/08	(616375, 6209775, 0.0)
33	1.69E+01	24,23/02/08	(616275, 6209775, 0.0)
34	1.69E+01	24,21/03/08	(616025, 6209725, 0.0)
35	1.68E+01	24,05/11/08	(616325, 6209825, 0.0)
36	1.68E+01	24,23/03/08	(616025, 6209725, 0.0)
37	1.64E+01	24,24/01/08	(616125, 6209825, 0.0)
38	1.62E+01	24,11/06/08	(616375, 6209725, 0.0)



APPENDIX B Dispersion Modelling

39	1.62E+01	24,01/07/08	(616425, 6209825,	0.0)
40	1.61E+01	24,15/09/08	(616375, 6209825,	0.0)
41	1.60E+01	24,06/01/08	(616175, 6209825,	0.0)
42	1.59E+01	24,29/06/08	(616325, 6209775,	0.0)
43	1.58E+01	24,05/02/08	(616075, 6209775,	0.0)
44	1.58E+01	24,29/02/08	(616025, 6209675,	0.0)
45	1.57E+01	24,21/10/08	(616025, 6209675,	0.0)
46	1.56E+01	24,29/01/08	(616125, 6209775,	0.0)
47	1.55E+01	24,25/04/08	(616425, 6209825,	0.0)
48	1.55E+01	24,22/01/08	(616075, 6209775,	0.0)
49	1.54E+01	24,01/04/08	(616275, 6209725,	0.0)
50	1.53E+01	24,12/02/08	(616125, 6209775,	0.0)
51	1.53E+01	24,07/07/08	(616475, 6209875,	0.0)
52	1.53E+01	24,30/10/08	(616325, 6209825,	0.0)
53	1.50E+01	24,24/07/08	(616275, 6209725,	0.0)
54	1.50E+01	24,20/10/08	(616075, 6209725,	0.0)
55	1.49E+01	24,16/11/08	(616025, 6209725,	0.0)
56	1.49E+01	24,27/05/08	(616225, 6209825,	0.0)
57	1.49E+01	24,26/01/08	(616275, 6209775,	0.0)
58	1.49E+01	24,02/02/08	(616075, 6209775,	0.0)
59	1.48E+01	24,12/07/08	(616325, 6209775,	0.0)
60	1.48E+01	24,08/09/08	(616025, 6209675,	0.0)
61	1.48E+01	24,21/08/08	(616275, 6209925,	0.0)
62	1.48E+01	24,17/07/08	(616475, 6209775,	0.0)
63	1.47E+01	24,13/12/08	(616275, 6209675,	0.0)
64	1.46E+01	24,09/08/08	(616425, 6209875,	0.0)
65	1.45E+01	24,10/06/08	(616325, 6209775,	0.0)
66	1.45E+01	24,02/01/08	(616125, 6209775,	0.0)
67	1.44E+01	24,03/10/08	(616225, 6209825,	0.0)
68	1.44E+01	24,07/01/08	(616125, 6209775,	0.0)
69	1.42E+01	24,07/06/08	(616025, 6209675,	0.0)
70	1.42E+01	24,17/09/08	(616225, 6209725,	0.0)
71	1.42E+01	24,29/12/08	(616275, 6209625,	0.0)
72	1.42E+01	24,15/11/08	(616125, 6209825,	0.0)
73	1.42E+01	24,10/12/08	(616025, 6209725,	0.0)
74	1.42E+01	24,01/08/08	(616425, 6209825,	0.0)
75	1.41E+01	24,26/11/08	(616325, 6209825,	0.0)
76	1.40E+01	24,01/05/08	(616325, 6209825,	0.0)
77	1.39E+01	24,30/01/08	(616125, 6209775,	0.0)
78	1.39E+01	24,16/06/08	(616225, 6209725,	0.0)
79	1.38E+01	24,02/04/08	(616425, 6209875,	0.0)
80	1.38E+01	24,27/02/08	(616125, 6209775,	0.0)
81	1.37E+01	24,09/04/08	(616225, 6209825,	0.0)
82	1.36E+01	24,27/08/08	(616025, 6209625,	0.0)
83	1.36E+01	24,19/07/08	(616325, 6209725,	0.0)
84	1.35E+01	24,31/12/08	(616325, 6209825,	0.0)
85	1.33E+01	24,24/04/08	(616325, 6209725,	0.0)
86	1.33E+01	24,09/12/08	(616175, 6209825,	0.0)
87	1.33E+01	24,03/02/08	(616075, 6209775,	0.0)
88	1.32E+01	24,05/12/08	(616325, 6209825,	0.0)
89	1.32E+01	24,19/12/08	(616025, 6209675,	0.0)
90	1.31E+01	24,12/09/08	(616375, 6209775,	0.0)
91	1.31E+01	24,06/02/08	(616125, 6209775,	0.0)
92	1.31E+01	24,31/01/08	(616075, 6209775,	0.0)
93	1.31E+01	24,12/12/08	(616425, 6209925,	0.0)
94	1.30E+01	24,20/02/08	(616175, 6209975,	0.0)
95	1.30E+01	24,13/03/08	(616325, 6209675,	0.0)
96	1.30E+01	24,21/06/08	(616275, 6209625,	0.0)
97	1.30E+01	24,10/08/08	(616275, 6209625,	0.0)
98	1.30E+01	24,14/04/08	(616075, 6209775,	0.0)
99	1.30E+01	24,25/01/08	(616175, 6209775,	0.0)
100	1.29E+01	24,13/02/08	(616025, 6209725,	0.0)

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 2

Rank Value Time Recorded Coordinates
hour,date (* denotes polar)



APPENDIX B Dispersion Modelling

1	1.90E+02	24,08/05/08	(616375, 6209775, 0.0)
2	1.89E+02	24,28/04/08	(616425, 6209775, 0.0)
3	1.84E+02	24,15/12/08	(616425, 6209775, 0.0)
4	1.82E+02	24,31/05/08	(616375, 6209775, 0.0)
5	1.53E+02	24,25/04/08	(616425, 6209775, 0.0)
6	1.42E+02	24,26/10/08	(616425, 6209775, 0.0)
7	1.41E+02	24,05/05/08	(616425, 6209775, 0.0)
8	1.38E+02	24,18/05/08	(616425, 6209775, 0.0)
9	1.33E+02	24,22/06/08	(616425, 6209775, 0.0)
10	1.33E+02	24,31/03/08	(616425, 6209775, 0.0)
11	1.32E+02	24,25/12/08	(616375, 6209775, 0.0)
12	1.31E+02	24,26/11/08	(616425, 6209775, 0.0)
13	1.31E+02	24,17/05/08	(616425, 6209775, 0.0)
14	1.29E+02	24,02/05/08	(616425, 6209775, 0.0)
15	1.28E+02	24,05/11/08	(616425, 6209775, 0.0)
16	1.26E+02	24,01/07/08	(616425, 6209775, 0.0)
17	1.24E+02	24,27/04/08	(616425, 6209775, 0.0)
18	1.23E+02	24,12/08/08	(616425, 6209775, 0.0)
19	1.21E+02	24,11/04/08	(616425, 6209775, 0.0)
20	1.20E+02	24,01/08/08	(616425, 6209775, 0.0)
21	1.19E+02	24,01/12/08	(616425, 6209775, 0.0)
22	1.19E+02	24,07/07/08	(616425, 6209775, 0.0)
23	1.18E+02	24,24/03/08	(616425, 6209775, 0.0)
24	1.17E+02	24,31/12/08	(616425, 6209775, 0.0)
25	1.16E+02	24,02/07/08	(616425, 6209775, 0.0)
26	1.16E+02	24,30/12/08	(616425, 6209775, 0.0)
27	1.13E+02	24,21/05/08	(616375, 6209775, 0.0)
28	1.09E+02	24,12/05/08	(616375, 6209725, 0.0)
29	1.09E+02	24,15/07/08	(616425, 6209775, 0.0)
30	1.09E+02	24,06/05/08	(616425, 6209775, 0.0)
31	1.08E+02	24,15/09/08	(616425, 6209775, 0.0)
32	1.08E+02	24,11/08/08	(616425, 6209775, 0.0)
33	1.07E+02	24,03/07/08	(616425, 6209775, 0.0)
34	1.06E+02	24,04/03/08	(616375, 6209775, 0.0)
35	1.05E+02	24,30/03/08	(616425, 6209775, 0.0)
36	1.04E+02	24,10/05/08	(616375, 6209775, 0.0)
37	1.03E+02	24,11/12/08	(616375, 6209775, 0.0)
38	1.02E+02	24,01/05/08	(616425, 6209775, 0.0)
39	9.74E+01	24,05/12/08	(616425, 6209775, 0.0)
40	9.55E+01	24,03/04/08	(616425, 6209775, 0.0)
41	9.54E+01	24,26/06/08	(616425, 6209775, 0.0)
42	9.39E+01	24,29/11/08	(616425, 6209775, 0.0)
43	9.37E+01	24,14/06/08	(616375, 6209775, 0.0)
44	9.35E+01	24,08/07/08	(616425, 6209775, 0.0)
45	9.26E+01	24,22/07/08	(616375, 6209775, 0.0)
46	9.22E+01	24,28/03/08	(616425, 6209775, 0.0)
47	9.21E+01	24,25/11/08	(616375, 6209775, 0.0)
48	9.04E+01	24,27/12/08	(616425, 6209775, 0.0)
49	8.95E+01	24,25/07/08	(616425, 6209775, 0.0)
50	8.70E+01	24,12/11/08	(616425, 6209775, 0.0)
51	8.68E+01	24,29/12/08	(616425, 6209775, 0.0)
52	8.66E+01	24,11/10/08	(616375, 6209775, 0.0)
53	8.64E+01	24,02/12/08	(616425, 6209775, 0.0)
54	8.64E+01	24,20/06/08	(616425, 6209775, 0.0)
55	8.63E+01	24,29/03/08	(616425, 6209775, 0.0)
56	8.40E+01	24,23/12/08	(616375, 6209825, 0.0)
57	8.27E+01	24,23/09/08	(616425, 6209775, 0.0)
58	8.19E+01	24,04/04/08	(616475, 6209825, 0.0)
59	7.91E+01	24,08/10/08	(616425, 6209775, 0.0)
60	7.72E+01	24,10/07/08	(616425, 6209775, 0.0)
61	7.62E+01	24,09/01/08	(616425, 6209825, 0.0)
62	7.60E+01	24,20/09/08	(616425, 6209775, 0.0)
63	7.58E+01	24,31/08/08	(616425, 6209775, 0.0)
64	7.56E+01	24,05/07/08	(616425, 6209725, 0.0)
65	7.52E+01	24,07/05/08	(616425, 6209825, 0.0)
66	7.52E+01	24,07/08/08	(616425, 6209775, 0.0)
67	7.41E+01	24,07/11/08	(616425, 6209775, 0.0)
68	7.26E+01	24,27/03/08	(616375, 6209825, 0.0)
69	7.23E+01	24,24/07/08	(616425, 6209675, 0.0)
70	7.23E+01	24,30/06/08	(616425, 6209775, 0.0)



APPENDIX B Dispersion Modelling

71	7.22E+01	24,29/09/08	(616375, 6209775, 0.0)
72	7.18E+01	24,17/07/08	(616425, 6209775, 0.0)
73	7.06E+01	24,01/03/08	(616375, 6209775, 0.0)
74	7.05E+01	24,25/05/08	(616425, 6209775, 0.0)
75	6.94E+01	24,07/10/08	(616425, 6209775, 0.0)
76	6.89E+01	24,06/07/08	(616425, 6209775, 0.0)
77	6.77E+01	24,18/09/08	(616425, 6209775, 0.0)
78	6.75E+01	24,17/06/08	(616425, 6209725, 0.0)
79	6.74E+01	24,02/08/08	(616425, 6209725, 0.0)
80	6.67E+01	24,07/03/08	(616375, 6209775, 0.0)
81	6.66E+01	24,30/04/08	(616425, 6209725, 0.0)
82	6.66E+01	24,16/05/08	(616425, 6209775, 0.0)
83	6.62E+01	24,30/10/08	(616425, 6209775, 0.0)
84	6.62E+01	24,18/08/08	(616425, 6209775, 0.0)
85	6.62E+01	24,13/04/08	(616425, 6209825, 0.0)
86	6.61E+01	24,06/11/08	(616375, 6209775, 0.0)
87	6.60E+01	24,16/10/08	(616375, 6209775, 0.0)
88	6.60E+01	24,23/02/08	(616425, 6209825, 0.0)
89	6.59E+01	24,20/05/08	(616425, 6209825, 0.0)
90	6.53E+01	24,25/03/08	(616425, 6209775, 0.0)
91	6.52E+01	24,22/08/08	(616425, 6209825, 0.0)
92	6.47E+01	24,05/08/08	(616425, 6209775, 0.0)
93	6.42E+01	24,06/12/08	(616425, 6209825, 0.0)
94	6.38E+01	24,05/04/08	(616375, 6209775, 0.0)
95	6.36E+01	24,04/09/08	(616375, 6209775, 0.0)
96	6.34E+01	24,28/06/08	(616425, 6209675, 0.0)
97	6.30E+01	24,25/09/08	(616425, 6209725, 0.0)
98	6.29E+01	24,22/10/08	(616375, 6209775, 0.0)
99	6.28E+01	24,26/04/08	(616425, 6209775, 0.0)
100	6.27E+01	24,17/04/08	(616375, 6209775, 0.0)

- 1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 3

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	1.96E+02	24,28/04/08	(616425, 6209775, 0.0)
2	1.92E+02	24,08/05/08	(616375, 6209775, 0.0)
3	1.89E+02	24,15/12/08	(616425, 6209775, 0.0)
4	1.82E+02	24,31/05/08	(616375, 6209775, 0.0)
5	1.60E+02	24,25/04/08	(616425, 6209775, 0.0)
6	1.49E+02	24,05/05/08	(616425, 6209775, 0.0)
7	1.43E+02	24,26/10/08	(616425, 6209775, 0.0)
8	1.43E+02	24,18/05/08	(616425, 6209775, 0.0)
9	1.38E+02	24,31/03/08	(616425, 6209775, 0.0)
10	1.37E+02	24,01/07/08	(616425, 6209775, 0.0)
11	1.36E+02	24,26/11/08	(616425, 6209775, 0.0)
12	1.36E+02	24,22/06/08	(616425, 6209775, 0.0)
13	1.34E+02	24,17/05/08	(616425, 6209775, 0.0)
14	1.33E+02	24,25/12/08	(616375, 6209775, 0.0)
15	1.32E+02	24,02/05/08	(616425, 6209775, 0.0)
16	1.31E+02	24,05/11/08	(616425, 6209775, 0.0)
17	1.27E+02	24,01/08/08	(616425, 6209775, 0.0)
18	1.26E+02	24,12/08/08	(616425, 6209775, 0.0)
19	1.25E+02	24,27/04/08	(616425, 6209775, 0.0)
20	1.23E+02	24,11/04/08	(616425, 6209775, 0.0)
21	1.22E+02	24,24/03/08	(616425, 6209775, 0.0)
22	1.21E+02	24,01/12/08	(616425, 6209775, 0.0)
23	1.21E+02	24,02/07/08	(616425, 6209775, 0.0)
24	1.19E+02	24,07/07/08	(616425, 6209775, 0.0)
25	1.19E+02	24,30/12/08	(616425, 6209775, 0.0)
26	1.18E+02	24,31/12/08	(616425, 6209775, 0.0)
27	1.17E+02	24,12/05/08	(616375, 6209725, 0.0)
28	1.16E+02	24,06/05/08	(616425, 6209775, 0.0)
29	1.15E+02	24,15/07/08	(616425, 6209775, 0.0)
30	1.14E+02	24,11/08/08	(616425, 6209775, 0.0)
31	1.13E+02	24,21/05/08	(616375, 6209775, 0.0)



APPENDIX B Dispersion Modelling

32	1.13E+02	24,30/03/08	(616425, 6209775,	0.0)
33	1.12E+02	24,01/05/08	(616425, 6209775,	0.0)
34	1.10E+02	24,15/09/08	(616425, 6209775,	0.0)
35	1.08E+02	24,03/07/08	(616425, 6209775,	0.0)
36	1.07E+02	24,04/03/08	(616375, 6209775,	0.0)
37	1.06E+02	24,10/05/08	(616375, 6209775,	0.0)
38	1.04E+02	24,26/06/08	(616425, 6209775,	0.0)
39	1.03E+02	24,11/12/08	(616375, 6209775,	0.0)
40	1.03E+02	24,05/12/08	(616425, 6209775,	0.0)
41	1.02E+02	24,08/07/08	(616425, 6209775,	0.0)
42	9.93E+01	24,03/04/08	(616425, 6209775,	0.0)
43	9.70E+01	24,29/11/08	(616425, 6209775,	0.0)
44	9.43E+01	24,28/03/08	(616425, 6209775,	0.0)
45	9.41E+01	24,14/06/08	(616375, 6209775,	0.0)
46	9.30E+01	24,25/07/08	(616425, 6209775,	0.0)
47	9.30E+01	24,22/07/08	(616375, 6209775,	0.0)
48	9.28E+01	24,25/11/08	(616375, 6209775,	0.0)
49	9.14E+01	24,02/12/08	(616425, 6209775,	0.0)
50	9.13E+01	24,27/12/08	(616425, 6209775,	0.0)
51	9.09E+01	24,29/03/08	(616425, 6209775,	0.0)
52	8.95E+01	24,20/06/08	(616425, 6209775,	0.0)
53	8.88E+01	24,29/12/08	(616425, 6209775,	0.0)
54	8.75E+01	24,12/11/08	(616425, 6209775,	0.0)
55	8.71E+01	24,23/09/08	(616425, 6209775,	0.0)
56	8.70E+01	24,11/10/08	(616375, 6209775,	0.0)
57	8.56E+01	24,08/10/08	(616425, 6209775,	0.0)
58	8.54E+01	24,04/04/08	(616475, 6209825,	0.0)
59	8.49E+01	24,30/06/08	(616425, 6209775,	0.0)
60	8.43E+01	24,17/07/08	(616425, 6209775,	0.0)
61	8.42E+01	24,23/12/08	(616375, 6209825,	0.0)
62	8.23E+01	24,31/08/08	(616425, 6209775,	0.0)
63	8.21E+01	24,07/08/08	(616425, 6209775,	0.0)
64	8.05E+01	24,10/07/08	(616425, 6209775,	0.0)
65	8.03E+01	24,06/07/08	(616425, 6209775,	0.0)
66	7.99E+01	24,20/09/08	(616425, 6209775,	0.0)
67	7.78E+01	24,18/09/08	(616425, 6209775,	0.0)
68	7.77E+01	24,07/05/08	(616425, 6209825,	0.0)
69	7.76E+01	24,07/11/08	(616425, 6209775,	0.0)
70	7.67E+01	24,09/01/08	(616425, 6209825,	0.0)
71	7.56E+01	24,05/07/08	(616425, 6209725,	0.0)
72	7.52E+01	24,25/05/08	(616425, 6209775,	0.0)
73	7.47E+01	24,30/10/08	(616425, 6209775,	0.0)
74	7.46E+01	24,07/10/08	(616425, 6209775,	0.0)
75	7.27E+01	24,27/03/08	(616375, 6209825,	0.0)
76	7.27E+01	24,18/08/08	(616425, 6209775,	0.0)
77	7.27E+01	24,02/08/08	(616425, 6209725,	0.0)
78	7.26E+01	24,01/09/08	(616425, 6209775,	0.0)
79	7.25E+01	24,29/09/08	(616375, 6209775,	0.0)
80	7.23E+01	24,24/07/08	(616425, 6209675,	0.0)
81	7.08E+01	24,01/03/08	(616375, 6209775,	0.0)
82	6.90E+01	24,20/05/08	(616425, 6209825,	0.0)
83	6.84E+01	24,23/02/08	(616425, 6209825,	0.0)
84	6.82E+01	24,26/04/08	(616425, 6209775,	0.0)
85	6.82E+01	24,13/04/08	(616425, 6209825,	0.0)
86	6.80E+01	24,16/05/08	(616425, 6209775,	0.0)
87	6.79E+01	24,07/03/08	(616375, 6209775,	0.0)
88	6.79E+01	24,17/06/08	(616425, 6209725,	0.0)
89	6.75E+01	24,30/04/08	(616425, 6209725,	0.0)
90	6.73E+01	24,05/08/08	(616425, 6209775,	0.0)
91	6.71E+01	24,25/03/08	(616425, 6209775,	0.0)
92	6.65E+01	24,06/11/08	(616375, 6209775,	0.0)
93	6.62E+01	24,16/10/08	(616375, 6209775,	0.0)
94	6.62E+01	24,22/08/08	(616425, 6209825,	0.0)
95	6.57E+01	24,06/12/08	(616425, 6209825,	0.0)
96	6.55E+01	24,01/10/08	(616425, 6209775,	0.0)
97	6.41E+01	24,04/09/08	(616375, 6209775,	0.0)
98	6.40E+01	24,05/04/08	(616375, 6209775,	0.0)
99	6.34E+01	24,28/06/08	(616425, 6209675,	0.0)
100	6.34E+01	24,08/11/08	(616425, 6209775,	0.0)



1.2.2 Discrete Receptors: Sensitive Receptors

1

Port Spencer - PM2.5 - Discrete Receptors

Concentration or deposition	Concentration
Emission rate units	kg/hour
Concentration units	microgram/m3
Units conversion factor	2.78E+05
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m
Use the convective PDF algorithm?	No
Averaging time for sigma-theta values	60 min.

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high Sigma-theta
 Vertical dispersion curves for sources <100m high Pasquill-Gifford
 Horizontal dispersion curves for sources >100m high Briggs Rural
 Vertical dispersion curves for sources >100m high Briggs Rural
 Enhance horizontal plume spreads for buoyancy? Yes
 Enhance vertical plume spreads for buoyancy? Yes
 Adjust horizontal P-G formulae for roughness height? Yes
 Adjust vertical P-G formulae for roughness height? Yes
 Roughness height 0.100m
 Adjustment for wind directional shear None

PLUME RISE OPTIONS

Gradual plume rise? Yes
 Stack-tip downwash included? Yes
 Building downwash algorithm: PRIME method.
 Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
 Partial penetration of elevated inversions? No
 Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients given by the hourly met. file, a value from the following table (in K/m) is used:

Wind Speed Category	Stability Class					
	A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES

Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES

24 hours
 average over all hours

Port Spencer - PM2.5 - Discrete Receptors



APPENDIX B Dispersion Modelling

SOURCE GROUPS

Group No. Members

1	HEMA-R HEMA-S GENRTR TP-H1 TP-H2 TP-H3 TP-H4 HEMARV HEMSHP
2	GRAI-R GENRTR TP-G1 TP-G2 TP-G3 TP-G4 GRAIRV GRASHP
3	HEMA-R HEMA-S GRAI-R GENRTR TP-H1 TP-H2 TP-H3 TP-H4 TP-G1 TP-G2 TP-G3 TP-G4 HEMARV GRAIRV HEMSHP GRASHP

1

Port Spencer - PM2.5 - Discrete Receptors

SOURCE CHARACTERISTICS

STACK SOURCE: HEMA-R

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616265 6209823 9m 0m 1.06m 25C 16.0m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	5.04E-01	8	5.04E-01
9	5.04E-01	10	5.04E-01	11	5.04E-01	12	5.04E-01
13	5.04E-01	14	5.04E-01	15	5.04E-01	16	5.04E-01
17	5.04E-01	18	5.04E-01	19	5.04E-01	20	5.04E-01
21	5.04E-01	22	5.04E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

STACK SOURCE: HEMA-S

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
616187 6209589 13m 23m 1.67m 25C 16.0m/s



APPENDIX B Dispersion Modelling

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	140	164	184	198	205	207	203	202	206	205	196	183
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	205	197	182	163	139	110	78	79	111	140	164	184
Along-flow distance from stack	-10	-15	-19	-23	-25	-28	-29	-47	-80	-111	-139	-162
Across-flow distance from stack	41	56	70	82	91	97	100	101	98	92	84	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	140	164	184	198	205	207
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	198	206	207	203	202	206	205	196	182	163	139	110
Along-flow distance from stack	-180	-193	-200	-202	-202	-201	-195	-182	-164	-141	-113	-83
Across-flow distance from stack	59	44	28	10	-7	-25	-41	-56	-70	-81	-91	-97

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	203	202	206	204	197	183	163	139	110	78	79	111
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	78	79	111	140	164	184	198	206	208	203	202	206
Along-flow distance from stack	-49	-32	-31	-29	-26	-22	-17	-13	-7	-1	0	-5
Across-flow distance from stack	-100	-101	-98	-92	-84	-72	-59	-44	-27	-10	7	25

(Constant) emission rate = 1.26E+00 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: GRAI-R

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616403	6209775	14m	0m	1.11m	25C	16.0m/s

_____ Effective building dimensions (in metres) _____

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	188	179	165	146	122	95	64	67	97	125	148	167
Effective building height	14	14	14	14	14	14	14	14	14	14	14	14
Along-flow building length	125	148	167	181	190	192	189	188	191	188	179	165
Along-flow distance from stack	-22	-17	-12	-7	-1	5	10	12	8	4	0	-5
Across-flow distance from stack	-98	-89	-78	-64	-49	-32	-14	5	24	41	58	72

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	181	190	192	0	0	0	188	179	165	146	122	95
Effective building height	14	14	14	0	0	0	14	14	14	14	14	14
Along-flow building length	146	122	95	0	0	0	125	148	167	181	190	192
Along-flow distance from stack	-9	-13	-16	0	0	0	-104	-132	-156	-175	-189	-197
Across-flow distance from stack	84	94	101	0	0	0	98	89	78	64	49	31

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	65	67	97	125	148	167	181	190	192	0	0	0
Effective building height	14	14	14	14	14	14	14	14	0	0	0	0
Along-flow building length	189	188	191	188	179	165	146	122	95	0	0	0
Along-flow distance from stack	-200	-200	-199	-192	-179	-160	-137	-110	-79	0	0	0
Across-flow distance from stack	13	-6	-24	-41	-57	-72	-85	-94	-101	0	0	0

Emission rates by hour of day in kg/hour:

1	0.00E+00	2	0.00E+00	3	0.00E+00	4	0.00E+00
5	0.00E+00	6	0.00E+00	7	5.58E-01	8	5.58E-01
9	5.58E-01	10	5.58E-01	11	5.58E-01	12	5.58E-01
13	5.58E-01	14	5.58E-01	15	5.58E-01	16	5.58E-01
17	5.58E-01	18	5.58E-01	19	5.58E-01	20	5.58E-01
21	5.58E-01	22	5.58E-01	23	0.00E+00	24	0.00E+00

No gravitational settling or scavenging.

STACK SOURCE: GENRTR

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616127	6209440	15m	5m	1.10m	300C	30.0m/s

_____ Effective building dimensions (in metres) _____



APPENDIX B Dispersion Modelling

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 2.22E-01 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H1

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616223	6209554	15m	3m	0.36m	25C	11.1m/s

_____ Effective building dimensions (in metres) _____												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	196	183
Effective building height	0	0	0	0	0	0	0	0	0	0	14	14
Along-flow building length	0	0	0	0	0	0	0	0	0	0	164	184
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	-184	-210
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	104	85

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	163	139	110	78	79	111	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	198	206	207	203	202	206	0	0	0	0	0	0
Along-flow distance from stack	-230	-243	-249	-247	-243	-236	0	0	0	0	0	0
Across-flow distance from stack	63	39	14	-12	-37	-61	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	197	183	0	0	0	0	0	0
Effective building height	0	0	0	0	14	14	0	0	0	0	0	0
Along-flow building length	0	0	0	0	164	184	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	20	27	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	-104	-85	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-H2

X(m)	Y(m)	Ground Elev.	Stack Height	Diameter	Temperature	Speed
616666	6209673	14m	7m	0.36m	25C	11.1m/s

_____ Effective building dimensions (in metres) _____												
Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B Dispersion Modelling

Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H3

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617308 6209513 0m 5m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-H4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 617298 6209466 0m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)
 Flow direction 10° 20° 30° 40° 50° 60° 70° 80° 90° 100° 110° 120°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 130° 140° 150° 160° 170° 180° 190° 200° 210° 220° 230° 240°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

Flow direction 250° 260° 270° 280° 290° 300° 310° 320° 330° 340° 350° 360°
 Effective building width 0 0 0 0 0 0 0 0 0 0 0 0
 Effective building height 0 0 0 0 0 0 0 0 0 0 0 0
 Along-flow building length 0 0 0 0 0 0 0 0 0 0 0 0



APPENDIX B Dispersion Modelling

Along-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0
 Across-flow distance from stack 0 0 0 0 0 0 0 0 0 0 0 0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G1

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616624 6209832 15m 3m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	165	146	122	95	64	67	97	125	148	167
Effective building height	0	0	14	14	14	14	14	14	14	14	14	14
Along-flow building length	0	0	167	181	190	192	189	188	191	188	179	165
Along-flow distance from stack	0	0	-172	-192	-207	-215	-217	-216	-213	-204	-189	-167
Across-flow distance from stack	0	0	85	68	50	30	9	-13	-34	-54	-72	-88

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	165	146	122	95	
Effective building height	0	0	0	0	0	0	0	14	14	14	14	
Along-flow building length	0	0	0	0	0	0	0	167	181	190	192	
Along-flow distance from stack	0	0	0	0	0	0	0	5	11	17	23	
Across-flow distance from stack	0	0	0	0	0	0	0	-85	-69	-50	-30	

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	65	67	97	125	148	167	0	0	0	0	0	0
Effective building height	14	14	14	14	14	14	0	0	0	0	0	0
Along-flow building length	189	188	191	188	179	165	0	0	0	0	0	0
Along-flow distance from stack	28	27	22	16	9	3	0	0	0	0	0	0
Across-flow distance from stack	-9	13	34	53	72	88	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G2

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
 616666 6209673 14m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
 No gravitational settling or scavenging.

STACK SOURCE: TP-G3



APPENDIX B Dispersion Modelling

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617308 6209513 0m 5m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

STACK SOURCE: TP-G4

X(m) Y(m) Ground Elev. Stack Height Diameter Temperature Speed
617249 6209280 0m 7m 0.36m 25C 11.1m/s

Effective building dimensions (in metres)

Flow direction	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

Flow direction	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°	360°
Effective building width	0	0	0	0	0	0	0	0	0	0	0	0
Effective building height	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow building length	0	0	0	0	0	0	0	0	0	0	0	0
Along-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0
Across-flow distance from stack	0	0	0	0	0	0	0	0	0	0	0	0

(Constant) emission rate = 4.00E-02 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: HEMARV

X(m) Y(m) Ground Elevation Height Hor. spread Vert. spread
616265 6209823 9m 5m 1m 3m

Emission rates by hour of day in kg/hour:

1 0.00E+00	2 0.00E+00	3 0.00E+00	4 0.00E+00
5 0.00E+00	6 0.00E+00	7 3.00E-02	8 3.00E-02
9 3.00E-02	10 3.00E-02	11 3.00E-02	12 3.00E-02
13 3.00E-02	14 3.00E-02	15 3.00E-02	16 3.00E-02
17 3.00E-02	18 3.00E-02	19 3.00E-02	20 3.00E-02



APPENDIX B Dispersion Modelling

21 3.00E-02 22 3.00E-02 23 0.00E+00 24 0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: GRAIRV

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
616403	6209775	13m	5m	1m	3m

Emission rates by hour of day in kg/hour:

1 0.00E+00	2 0.00E+00	3 0.00E+00	4 0.00E+00
5 0.00E+00	6 0.00E+00	7 4.50E-01	8 4.50E-01
9 4.50E-01	10 4.50E-01	11 4.50E-01	12 4.50E-01
13 4.50E-01	14 4.50E-01	15 4.50E-01	16 4.50E-01
17 4.50E-01	18 4.50E-01	19 4.50E-01	20 4.50E-01
21 4.50E-01	22 4.50E-01	23 0.00E+00	24 0.00E+00

No gravitational settling or scavenging.

VOLUME SOURCE: HEMSHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617371	6209484	0m	12m	8m	6m

(Constant) emission rate = 2.00E-02 kg/hour
No gravitational settling or scavenging.

VOLUME SOURCE: GRASHP

X(m)	Y(m)	Ground Elevation	Height	Hor. spread	Vert. spread
617317	6209239	0m	12m	8m	6m

(Constant) emission rate = 2.20E-01 kg/hour
No gravitational settling or scavenging.

1

Port Spencer - PM2.5 - Discrete Receptors

RECEPTOR LOCATIONS

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	616063	6210808	23.0	0.0	4	613277	6208896	73.0	0.0
2	614615	6210260	48.0	0.0	5	612459	6211089	68.0	0.0
3	613977	6211372	93.0	0.0					

METEOROLOGICAL DATA : AUSPLUME METFILE

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 1
in microgram/m3

Concentrations at the discrete receptors (No. : Value):

1:2.69E-01 2:1.35E-01 3:1.00E-01 4:7.20E-02 5:4.93E-02



APPENDIX B Dispersion Modelling

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 2
in microgram/m3

Concentrations at the discrete receptors (No. : Value):

1:2.52E-01 2:8.83E-02 3:7.08E-02 4:5.04E-02 5:3.60E-02

AVERAGE OVER ALL HOURS FOR SOURCE GROUP No. 3
in microgram/m3

Concentrations at the discrete receptors (No. : Value):

1:5.13E-01 2:2.17E-01 3:1.61E-01 4:1.18E-01 5:8.16E-02

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 1

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	2.88E+00	24,05/09/08	(616063, 6210808, 0.0)
2	2.70E+00	24,29/01/08	(616063, 6210808, 0.0)
3	2.57E+00	24,03/01/08	(616063, 6210808, 0.0)
4	2.53E+00	24,11/03/08	(616063, 6210808, 0.0)
5	2.38E+00	24,27/10/08	(616063, 6210808, 0.0)
6	2.29E+00	24,24/02/08	(616063, 6210808, 0.0)
7	2.22E+00	24,30/01/08	(616063, 6210808, 0.0)
8	2.17E+00	24,13/08/08	(616063, 6210808, 0.0)
9	2.08E+00	24,19/06/08	(616063, 6210808, 0.0)
10	1.95E+00	24,27/08/08	(614615, 6210260, 0.0)
11	1.94E+00	24,24/12/08	(616063, 6210808, 0.0)
12	1.92E+00	24,15/11/08	(616063, 6210808, 0.0)
13	1.90E+00	24,19/10/08	(616063, 6210808, 0.0)
14	1.79E+00	24,07/02/08	(616063, 6210808, 0.0)
15	1.77E+00	24,27/01/08	(616063, 6210808, 0.0)
16	1.76E+00	24,16/02/08	(616063, 6210808, 0.0)
17	1.75E+00	24,06/02/08	(616063, 6210808, 0.0)
18	1.74E+00	24,09/05/08	(614615, 6210260, 0.0)
19	1.68E+00	24,27/02/08	(616063, 6210808, 0.0)
20	1.65E+00	24,08/09/08	(614615, 6210260, 0.0)
21	1.64E+00	24,30/05/08	(614615, 6210260, 0.0)
22	1.61E+00	24,06/01/08	(616063, 6210808, 0.0)
23	1.58E+00	24,26/08/08	(616063, 6210808, 0.0)
24	1.57E+00	24,10/05/08	(613977, 6211372, 0.0)
25	1.56E+00	24,04/09/08	(613977, 6211372, 0.0)
26	1.44E+00	24,24/01/08	(616063, 6210808, 0.0)
27	1.40E+00	24,04/02/08	(616063, 6210808, 0.0)
28	1.39E+00	24,07/01/08	(616063, 6210808, 0.0)
29	1.39E+00	24,13/02/08	(613977, 6211372, 0.0)
30	1.37E+00	24,20/04/08	(613277, 6208896, 0.0)
31	1.37E+00	24,03/11/08	(616063, 6210808, 0.0)
32	1.34E+00	24,29/02/08	(614615, 6210260, 0.0)
33	1.32E+00	24,15/03/08	(616063, 6210808, 0.0)
34	1.30E+00	24,07/06/08	(614615, 6210260, 0.0)
35	1.27E+00	24,09/12/08	(616063, 6210808, 0.0)
36	1.26E+00	24,21/10/08	(614615, 6210260, 0.0)
37	1.25E+00	24,28/01/08	(616063, 6210808, 0.0)
38	1.23E+00	24,16/12/08	(614615, 6210260, 0.0)
39	1.23E+00	24,14/01/08	(616063, 6210808, 0.0)
40	1.23E+00	24,16/01/08	(616063, 6210808, 0.0)
41	1.21E+00	24,25/12/08	(614615, 6210260, 0.0)
42	1.21E+00	24,12/03/08	(616063, 6210808, 0.0)
43	1.20E+00	24,26/02/08	(616063, 6210808, 0.0)



APPENDIX B Dispersion Modelling

44	1.17E+00	24,08/06/08	(613277, 6208896,	0.0)
45	1.16E+00	24,02/02/08	(616063, 6210808,	0.0)
46	1.15E+00	24,23/11/08	(614615, 6210260,	0.0)
47	1.15E+00	24,21/03/08	(613977, 6211372,	0.0)
48	1.14E+00	24,21/04/08	(614615, 6210260,	0.0)
49	1.11E+00	24,04/03/08	(616063, 6210808,	0.0)
50	1.11E+00	24,14/06/08	(614615, 6210260,	0.0)
51	1.10E+00	24,22/04/08	(613277, 6208896,	0.0)
52	1.09E+00	24,08/12/08	(614615, 6210260,	0.0)
53	1.08E+00	24,15/01/08	(613977, 6211372,	0.0)
54	1.07E+00	24,14/11/08	(616063, 6210808,	0.0)
55	1.06E+00	24,25/01/08	(616063, 6210808,	0.0)
56	1.04E+00	24,03/02/08	(616063, 6210808,	0.0)
57	1.03E+00	24,15/02/08	(614615, 6210260,	0.0)
58	9.71E-01	24,23/03/08	(613977, 6211372,	0.0)
59	9.68E-01	24,14/10/08	(616063, 6210808,	0.0)
60	9.58E-01	24,11/01/08	(616063, 6210808,	0.0)
61	9.55E-01	24,07/09/08	(616063, 6210808,	0.0)
62	9.33E-01	24,04/10/08	(614615, 6210260,	0.0)
63	9.31E-01	24,09/01/08	(614615, 6210260,	0.0)
64	9.16E-01	24,08/05/08	(614615, 6210260,	0.0)
65	9.15E-01	24,20/12/08	(613277, 6208896,	0.0)
66	8.91E-01	24,15/04/08	(614615, 6210260,	0.0)
67	8.90E-01	24,25/11/08	(613277, 6208896,	0.0)
68	8.88E-01	24,19/12/08	(614615, 6210260,	0.0)
69	8.79E-01	24,21/07/08	(616063, 6210808,	0.0)
70	8.58E-01	24,19/11/08	(616063, 6210808,	0.0)
71	8.33E-01	24,17/04/08	(614615, 6210260,	0.0)
72	8.28E-01	24,27/05/08	(616063, 6210808,	0.0)
73	8.26E-01	24,06/11/08	(614615, 6210260,	0.0)
74	8.04E-01	24,23/08/08	(614615, 6210260,	0.0)
75	7.98E-01	24,17/12/08	(614615, 6210260,	0.0)
76	7.95E-01	24,27/11/08	(616063, 6210808,	0.0)
77	7.90E-01	24,03/03/08	(613277, 6208896,	0.0)
78	7.89E-01	24,26/03/08	(616063, 6210808,	0.0)
79	7.87E-01	24,11/12/08	(613277, 6208896,	0.0)
80	7.73E-01	24,14/02/08	(614615, 6210260,	0.0)
81	7.65E-01	24,16/11/08	(613977, 6211372,	0.0)
82	7.65E-01	24,16/10/08	(613277, 6208896,	0.0)
83	7.62E-01	24,26/09/08	(616063, 6210808,	0.0)
84	7.53E-01	24,10/02/08	(614615, 6210260,	0.0)
85	7.39E-01	24,21/05/08	(614615, 6210260,	0.0)
86	7.30E-01	24,20/02/08	(616063, 6210808,	0.0)
87	7.30E-01	24,22/11/08	(616063, 6210808,	0.0)
88	7.13E-01	24,08/01/08	(616063, 6210808,	0.0)
89	7.10E-01	24,08/03/08	(613277, 6208896,	0.0)
90	6.94E-01	24,31/10/08	(616063, 6210808,	0.0)
91	6.91E-01	24,28/10/08	(613977, 6211372,	0.0)
92	6.91E-01	24,01/11/08	(614615, 6210260,	0.0)
93	6.81E-01	24,11/11/08	(613277, 6208896,	0.0)
94	6.76E-01	24,01/01/08	(616063, 6210808,	0.0)
95	6.66E-01	24,22/07/08	(613277, 6208896,	0.0)
96	6.65E-01	24,27/03/08	(616063, 6210808,	0.0)
97	6.65E-01	24,10/12/08	(613977, 6211372,	0.0)
98	6.61E-01	24,31/05/08	(613277, 6208896,	0.0)
99	6.52E-01	24,20/03/08	(616063, 6210808,	0.0)
100	6.30E-01	24,22/03/08	(614615, 6210260,	0.0)

1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 2

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)
1	4.41E+00	24,05/09/08	(616063, 6210808, 0.0)
2	2.69E+00	24,07/02/08	(616063, 6210808, 0.0)
3	2.44E+00	24,26/08/08	(616063, 6210808, 0.0)
4	2.34E+00	24,29/01/08	(616063, 6210808, 0.0)



APPENDIX B Dispersion Modelling

5	2.17E+00	24,22/03/08	(616063, 6210808,	0.0)
6	2.14E+00	24,10/05/08	(613977, 6211372,	0.0)
7	2.10E+00	24,21/07/08	(616063, 6210808,	0.0)
8	1.89E+00	24,25/02/08	(616063, 6210808,	0.0)
9	1.86E+00	24,27/08/08	(614615, 6210260,	0.0)
10	1.81E+00	24,24/02/08	(616063, 6210808,	0.0)
11	1.78E+00	24,30/01/08	(616063, 6210808,	0.0)
12	1.74E+00	24,27/03/08	(616063, 6210808,	0.0)
13	1.73E+00	24,30/05/08	(614615, 6210260,	0.0)
14	1.70E+00	24,04/06/08	(616063, 6210808,	0.0)
15	1.65E+00	24,15/10/08	(616063, 6210808,	0.0)
16	1.58E+00	24,11/03/08	(616063, 6210808,	0.0)
17	1.55E+00	24,14/01/08	(616063, 6210808,	0.0)
18	1.55E+00	24,16/02/08	(616063, 6210808,	0.0)
19	1.51E+00	24,02/02/08	(616063, 6210808,	0.0)
20	1.46E+00	24,27/02/08	(616063, 6210808,	0.0)
21	1.43E+00	24,04/09/08	(613977, 6211372,	0.0)
22	1.39E+00	24,12/03/08	(616063, 6210808,	0.0)
23	1.39E+00	24,27/10/08	(616063, 6210808,	0.0)
24	1.26E+00	24,20/02/08	(616063, 6210808,	0.0)
25	1.24E+00	24,10/11/08	(616063, 6210808,	0.0)
26	1.18E+00	24,07/12/08	(616063, 6210808,	0.0)
27	1.15E+00	24,03/06/08	(616063, 6210808,	0.0)
28	1.13E+00	24,07/09/08	(616063, 6210808,	0.0)
29	1.13E+00	24,12/02/08	(616063, 6210808,	0.0)
30	1.12E+00	24,31/01/08	(616063, 6210808,	0.0)
31	1.11E+00	24,15/02/08	(616063, 6210808,	0.0)
32	1.04E+00	24,20/04/08	(613277, 6208896,	0.0)
33	1.03E+00	24,08/01/08	(616063, 6210808,	0.0)
34	9.95E-01	24,17/01/08	(616063, 6210808,	0.0)
35	9.87E-01	24,09/05/08	(613977, 6211372,	0.0)
36	9.82E-01	24,05/02/08	(616063, 6210808,	0.0)
37	9.72E-01	24,14/10/08	(616063, 6210808,	0.0)
38	9.67E-01	24,13/02/08	(613977, 6211372,	0.0)
39	9.59E-01	24,08/09/08	(614615, 6210260,	0.0)
40	9.59E-01	24,09/01/08	(616063, 6210808,	0.0)
41	9.42E-01	24,21/04/08	(614615, 6210260,	0.0)
42	9.16E-01	24,14/04/08	(616063, 6210808,	0.0)
43	9.05E-01	24,15/11/08	(616063, 6210808,	0.0)
44	8.88E-01	24,25/12/08	(614615, 6210260,	0.0)
45	8.86E-01	24,15/03/08	(616063, 6210808,	0.0)
46	8.65E-01	24,01/02/08	(616063, 6210808,	0.0)
47	8.63E-01	24,07/01/08	(616063, 6210808,	0.0)
48	8.63E-01	24,16/12/08	(614615, 6210260,	0.0)
49	8.61E-01	24,05/06/08	(616063, 6210808,	0.0)
50	8.57E-01	24,04/10/08	(614615, 6210260,	0.0)
51	8.44E-01	24,04/03/08	(613277, 6208896,	0.0)
52	8.41E-01	24,14/06/08	(614615, 6210260,	0.0)
53	8.38E-01	24,16/01/08	(616063, 6210808,	0.0)
54	8.38E-01	24,06/11/08	(614615, 6210260,	0.0)
55	8.37E-01	24,02/01/08	(616063, 6210808,	0.0)
56	8.29E-01	24,13/01/08	(616063, 6210808,	0.0)
57	8.22E-01	24,21/02/08	(616063, 6210808,	0.0)
58	8.14E-01	24,03/01/08	(616063, 6210808,	0.0)
59	8.14E-01	24,17/11/08	(616063, 6210808,	0.0)
60	8.05E-01	24,23/08/08	(616063, 6210808,	0.0)
61	7.95E-01	24,08/05/08	(614615, 6210260,	0.0)
62	7.92E-01	24,24/01/08	(616063, 6210808,	0.0)
63	7.89E-01	24,19/10/08	(616063, 6210808,	0.0)
64	7.86E-01	24,21/03/08	(613977, 6211372,	0.0)
65	7.24E-01	24,08/06/08	(613277, 6208896,	0.0)
66	7.13E-01	24,06/03/08	(614615, 6210260,	0.0)
67	7.07E-01	24,07/06/08	(614615, 6210260,	0.0)
68	6.84E-01	24,29/02/08	(614615, 6210260,	0.0)
69	6.82E-01	24,26/02/08	(616063, 6210808,	0.0)
70	6.81E-01	24,20/12/08	(613277, 6208896,	0.0)
71	6.79E-01	24,23/11/08	(614615, 6210260,	0.0)
72	6.67E-01	24,18/11/08	(616063, 6210808,	0.0)
73	6.52E-01	24,23/03/08	(613977, 6211372,	0.0)
74	6.43E-01	24,06/02/08	(616063, 6210808,	0.0)
75	6.27E-01	24,09/12/08	(616063, 6210808,	0.0)



APPENDIX B Dispersion Modelling

76	6.23E-01	24,09/02/08	(616063, 6210808,	0.0)
77	6.21E-01	24,25/11/08	(613277, 6208896,	0.0)
78	6.16E-01	24,29/09/08	(613277, 6208896,	0.0)
79	5.98E-01	24,11/11/08	(616063, 6210808,	0.0)
80	5.94E-01	24,19/12/08	(614615, 6210260,	0.0)
81	5.89E-01	24,21/05/08	(614615, 6210260,	0.0)
82	5.88E-01	24,31/05/08	(613277, 6208896,	0.0)
83	5.73E-01	24,02/09/08	(616063, 6210808,	0.0)
84	5.73E-01	24,23/12/08	(616063, 6210808,	0.0)
85	5.72E-01	24,20/03/08	(616063, 6210808,	0.0)
86	5.70E-01	24,17/04/08	(614615, 6210260,	0.0)
87	5.69E-01	24,17/12/08	(614615, 6210260,	0.0)
88	5.57E-01	24,27/01/08	(616063, 6210808,	0.0)
89	5.55E-01	24,03/11/08	(616063, 6210808,	0.0)
90	5.49E-01	24,28/10/08	(613977, 6211372,	0.0)
91	5.45E-01	24,28/02/08	(616063, 6210808,	0.0)
92	5.39E-01	24,22/01/08	(616063, 6210808,	0.0)
93	5.36E-01	24,18/01/08	(616063, 6210808,	0.0)
94	5.33E-01	24,13/06/08	(616063, 6210808,	0.0)
95	5.28E-01	24,03/03/08	(613277, 6208896,	0.0)
96	5.24E-01	24,06/06/08	(616063, 6210808,	0.0)
97	5.20E-01	24,10/12/08	(616063, 6210808,	0.0)
98	5.18E-01	24,20/01/08	(616063, 6210808,	0.0)
99	5.04E-01	24,15/01/08	(613977, 6211372,	0.0)
100	4.99E-01	24,16/10/08	(613277, 6208896,	0.0)

- 1 Peak values for the 100 worst cases (in microgram/m3)
Averaging time = 24 hours; Source group No. 3

Rank	Value	Time Recorded hour,date	Coordinates (* denotes polar)	
1	7.29E+00	24,05/09/08	(616063, 6210808,	0.0)
2	5.02E+00	24,29/01/08	(616063, 6210808,	0.0)
3	4.47E+00	24,07/02/08	(616063, 6210808,	0.0)
4	4.09E+00	24,24/02/08	(616063, 6210808,	0.0)
5	4.09E+00	24,11/03/08	(616063, 6210808,	0.0)
6	3.99E+00	24,26/08/08	(616063, 6210808,	0.0)
7	3.99E+00	24,30/01/08	(616063, 6210808,	0.0)
8	3.74E+00	24,27/10/08	(616063, 6210808,	0.0)
9	3.74E+00	24,27/08/08	(614615, 6210260,	0.0)
10	3.71E+00	24,10/05/08	(613977, 6211372,	0.0)
11	3.37E+00	24,30/05/08	(614615, 6210260,	0.0)
12	3.33E+00	24,03/01/08	(616063, 6210808,	0.0)
13	3.28E+00	24,16/02/08	(616063, 6210808,	0.0)
14	3.14E+00	24,27/02/08	(616063, 6210808,	0.0)
15	2.95E+00	24,21/07/08	(616063, 6210808,	0.0)
16	2.90E+00	24,04/09/08	(613977, 6211372,	0.0)
17	2.78E+00	24,14/01/08	(616063, 6210808,	0.0)
18	2.76E+00	24,15/11/08	(616063, 6210808,	0.0)
19	2.66E+00	24,22/03/08	(616063, 6210808,	0.0)
20	2.65E+00	24,02/02/08	(616063, 6210808,	0.0)
21	2.62E+00	24,19/10/08	(616063, 6210808,	0.0)
22	2.60E+00	24,12/03/08	(616063, 6210808,	0.0)
23	2.49E+00	24,25/02/08	(616063, 6210808,	0.0)
24	2.49E+00	24,08/09/08	(614615, 6210260,	0.0)
25	2.42E+00	24,13/08/08	(616063, 6210808,	0.0)
26	2.41E+00	24,27/03/08	(616063, 6210808,	0.0)
27	2.34E+00	24,06/02/08	(616063, 6210808,	0.0)
28	2.29E+00	24,27/01/08	(616063, 6210808,	0.0)
29	2.28E+00	24,20/04/08	(613277, 6208896,	0.0)
30	2.23E+00	24,13/02/08	(613977, 6211372,	0.0)
31	2.20E+00	24,07/01/08	(616063, 6210808,	0.0)
32	2.19E+00	24,24/01/08	(616063, 6210808,	0.0)
33	2.17E+00	24,15/03/08	(616063, 6210808,	0.0)
34	2.17E+00	24,24/12/08	(616063, 6210808,	0.0)
35	2.13E+00	24,09/05/08	(614615, 6210260,	0.0)
36	2.10E+00	24,15/10/08	(616063, 6210808,	0.0)



APPENDIX B Dispersion Modelling

37	2.10E+00	24,19/06/08	(616063, 6210808,	0.0)
38	2.09E+00	24,04/06/08	(616063, 6210808,	0.0)
39	2.08E+00	24,07/09/08	(616063, 6210808,	0.0)
40	2.08E+00	24,25/12/08	(614615, 6210260,	0.0)
41	2.07E+00	24,21/04/08	(614615, 6210260,	0.0)
42	2.05E+00	24,16/12/08	(614615, 6210260,	0.0)
43	2.01E+00	24,16/01/08	(616063, 6210808,	0.0)
44	1.98E+00	24,29/02/08	(614615, 6210260,	0.0)
45	1.97E+00	24,20/02/08	(616063, 6210808,	0.0)
46	1.93E+00	24,07/06/08	(614615, 6210260,	0.0)
47	1.92E+00	24,14/10/08	(616063, 6210808,	0.0)
48	1.90E+00	24,14/06/08	(614615, 6210260,	0.0)
49	1.89E+00	24,06/01/08	(616063, 6210808,	0.0)
50	1.86E+00	24,04/03/08	(613277, 6208896,	0.0)
51	1.85E+00	24,03/11/08	(616063, 6210808,	0.0)
52	1.84E+00	24,26/02/08	(616063, 6210808,	0.0)
53	1.83E+00	24,09/12/08	(616063, 6210808,	0.0)
54	1.82E+00	24,08/06/08	(613277, 6208896,	0.0)
55	1.79E+00	24,21/03/08	(613977, 6211372,	0.0)
56	1.78E+00	24,04/10/08	(614615, 6210260,	0.0)
57	1.77E+00	24,23/11/08	(614615, 6210260,	0.0)
58	1.77E+00	24,07/12/08	(616063, 6210808,	0.0)
59	1.73E+00	24,08/01/08	(616063, 6210808,	0.0)
60	1.71E+00	24,28/01/08	(616063, 6210808,	0.0)
61	1.71E+00	24,08/05/08	(614615, 6210260,	0.0)
62	1.67E+00	24,09/01/08	(616063, 6210808,	0.0)
63	1.66E+00	24,06/11/08	(614615, 6210260,	0.0)
64	1.66E+00	24,21/10/08	(614615, 6210260,	0.0)
65	1.60E+00	24,12/02/08	(616063, 6210808,	0.0)
66	1.58E+00	24,10/11/08	(616063, 6210808,	0.0)
67	1.56E+00	24,20/12/08	(613277, 6208896,	0.0)
68	1.54E+00	24,23/03/08	(613977, 6211372,	0.0)
69	1.51E+00	24,31/01/08	(616063, 6210808,	0.0)
70	1.50E+00	24,04/02/08	(616063, 6210808,	0.0)
71	1.49E+00	24,15/02/08	(614615, 6210260,	0.0)
72	1.48E+00	24,08/12/08	(614615, 6210260,	0.0)
73	1.46E+00	24,15/01/08	(613977, 6211372,	0.0)
74	1.45E+00	24,25/11/08	(613277, 6208896,	0.0)
75	1.45E+00	24,25/01/08	(616063, 6210808,	0.0)
76	1.45E+00	24,23/08/08	(616063, 6210808,	0.0)
77	1.43E+00	24,13/01/08	(616063, 6210808,	0.0)
78	1.42E+00	24,22/04/08	(613277, 6208896,	0.0)
79	1.42E+00	24,03/06/08	(616063, 6210808,	0.0)
80	1.42E+00	24,19/12/08	(614615, 6210260,	0.0)
81	1.40E+00	24,03/02/08	(616063, 6210808,	0.0)
82	1.37E+00	24,21/02/08	(616063, 6210808,	0.0)
83	1.36E+00	24,17/12/08	(614615, 6210260,	0.0)
84	1.36E+00	24,17/04/08	(614615, 6210260,	0.0)
85	1.32E+00	24,03/03/08	(613277, 6208896,	0.0)
86	1.29E+00	24,21/05/08	(614615, 6210260,	0.0)
87	1.29E+00	24,06/03/08	(614615, 6210260,	0.0)
88	1.28E+00	24,02/01/08	(616063, 6210808,	0.0)
89	1.27E+00	24,19/11/08	(616063, 6210808,	0.0)
90	1.26E+00	24,17/01/08	(616063, 6210808,	0.0)
91	1.24E+00	24,11/11/08	(616063, 6210808,	0.0)
92	1.22E+00	24,20/03/08	(616063, 6210808,	0.0)
93	1.21E+00	24,29/09/08	(613277, 6208896,	0.0)
94	1.21E+00	24,16/10/08	(613277, 6208896,	0.0)
95	1.19E+00	24,31/05/08	(613277, 6208896,	0.0)
96	1.18E+00	24,08/03/08	(613277, 6208896,	0.0)
97	1.17E+00	24,01/02/08	(616063, 6210808,	0.0)
98	1.17E+00	24,15/04/08	(614615, 6210260,	0.0)
99	1.17E+00	24,28/10/08	(613977, 6211372,	0.0)
100	1.16E+00	24,26/09/08	(616063, 6210808,	0.0)



APPENDIX C

Limitations (LEG04, RL1)



LIMITATIONS

This Document has been provided by Golder Associates Pty Ltd (“Golder”) subject to the following limitations:

This Document has been prepared for the particular purpose outlined in Golder’s proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.

The scope and the period of Golder’s Services are as described in Golder’s proposal, and are subject to restrictions and limitations. Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Golder in regards to it.

Conditions may exist which were not detected given the limited nature of the enquiry Golder was retained to undertake with respect to the site. Variations in conditions may occur between assessment locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.

In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. Golder’s opinions are based upon information that existed at the time the information is collected. It is understood that the Services provided allowed Golder to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

Any assessments, designs, and advice provided in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.

Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Golder for incomplete or inaccurate data supplied by others.

Golder may have retained subconsultants affiliated with Golder to provide Services for the benefit of Golder. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any direct legal recourse to, and waives any claim, demand, or cause of action against, Golder’s affiliated companies, and their employees, officers and directors.

This Document is provided for sole use by the Client and is confidential to it and its professional advisers. No responsibility whatsoever for the contents of this Document will be accepted to any person other than the Client. Any use which a third party makes of this Document, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this Document.

Golder Associates Pty Ltd GAP Form No. LEG04 RL1

At Golder Associates we strive to be the most respected global company providing consulting, design, and construction services in earth, environment, and related areas of energy. Employee owned since our formation in 1960, our focus, unique culture and operating environment offer opportunities and the freedom to excel, which attracts the leading specialists in our fields. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees who operate from offices located throughout Africa, Asia, Australasia, Europe, North America, and South America.

Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Pty Ltd
Building 7, Botanicca Corporate Park
570 – 588 Swan Street
Richmond, Victoria 3121
Australia
T: +61 3 8862 3500

