SEVENTH FRAMEWORK PROGRAMME
THEME 3
ICT - INFORMATION AND COMMUNICATION TECHNOLOGIES

Project acronym:	AEOLUS
Project full title:	Distributed Control of Large-Scale Offshore Wind Farms
Project reference:	**224548**
Start date:	1 May 2008
Duration:	36 months

Deliverable no.: 1.5b

Title: Final maps of wind fields and mechanical loads and energy output

Contractual date of delivery:	30 April 2010
Actual date of delivery:	07 June 2010
Lead beneficiary of this deliverable:	ECN
Author(s):	A.J. Brand
Participant(s):	A.J. Brand
Work packages contributing to the deliverable:	WP1
Nature:	R+O
Version:	1
Total number of pages:	12
Dissemination level:	PU

Summary:
This report is the user's manual of the computer programme of the quasi-steady wind farm flow model. This model calculates quasi-steady maps of wind, loads and energy in the form of tables with the mean and the standard deviation of six quantities (wind speed at the turbine, rotor thrust, tower bending moment, blade bending moment, aerodynamic power, and rotor shaft torque) and three load quantifiers (equivalent tower bending moment, equivalent blade bending moment, and equivalent rotor shaft torque) as a function of three input quantities (wind speed, wind speed standard deviation, and wind direction).

Final maps of wind fields and mechanical loads and energy output Part 2: Quasi-steady wind farm flow model - User's manual

A.J. Brand
26 May 2010
Final

Abstract

This report is the user's manual of the computer programme of the quasi-steady wind farm flow model. This model calculates quasi-steady maps of wind, loads and energy in the form of tables with the mean and the standard deviation of six quantities (wind speed at the turbine, rotor thrust, tower bending moment, blade bending moment, aerodynamic power, and rotor shaft torque) and three load quantifiers (equivalent tower bending moment, equivalent blade bending moment, and equivalent rotor shaft torque) as a function of three input quantities (wind speed, wind speed standard deviation, and wind direction).

Contents

1 INTRODUCTION 2
2 GETTING STARTED 3
2.1 Programme files 3
2.2 Building the programme 3
2.3 Running the programme 3
2.4 Programme input and output 4
2.4.1 Input 4
2.4.2 Output 5
3 MAINTENANCE 7
3.1 CHANGE OF INPUT 7
3.1.1 Wind farm 7
3.1.2 Wind turbine 7
3.2 CHANGE OF LEVEL OF DETAIL OF OUTPUT 7
3.2.1 Wind speed 7
3.2.2 Wind direction 7
3.2.3 Turbulence intensity 7
4 EXAMPLE 8
REFERENCES 12

1 Introduction

The specific objective of Work Package 1 of the FP7 project Aeolus is to develop quasi-static flow models which relate single turbine production and loading to a map of wind speeds. In this context the work in Task 1.2 "Flow and load/power relation" and Task 1.3 "Improved flow model" was aimed at developing a quasi-steady wind farm flow model. Task 1.4 "Final flow and load/power relation" subsequently was aimed at calculating expected energy production and fatigue loads on base of the improved flow model. The Deliverables D1.3 (Brand, 2009) and D1.4a (Brand and Wagenaar, 2010) presented preliminary resp. improved maps of wind, loads and energy, and the improved version of the flow model that was developed for that purpose. Deliverable D1.5a presented the final flow maps (Brand and Wagenaar, 2010)

This report is the user's manual of the final version of the computer programme of the quasi-steady wind farm flow model, and for that reason is Deliverable D1.5b. First, in chapter 2 we present the various programme files, explain how the programme is built and run, and describe the input and output. Next, in chapter 3 we address what is needed in order to change the input (e.g. different wind farm or wind turbine), or to change the level of detail in the output (e.g. wind direction). Finally, in chapter 4 we present an example of a map of wind, loads and energy.

2 Getting started

2.1 Programme files

The programme files include the following source files, input files and output files:

Name	Type	Function	Section number in model description
calcDerivatives1and2.f	Subroutine	Calculates 1st and 2nd derivative of tabulated quantity	
calcOtherQuantDeriv.f	Subroutine	Calculates 1st and 2nd derivative of quantities not being thrust	
calcThrustCurveDeriv.f	Subroutine	Calculates 1st and 2nd derivative of thrust	
calcTurbine.f	Subroutine	Calculates load, power, initial velocity deficit and initial added turbulence	2.2, 2.3
distTurbines.f	Subroutine	Calculates distance between turbines and the wind front	2.5
interpolateDerivatives.f	Subroutine	Interpolates derivates of tabulated values	
rankTurbines.f	Subroutine	Ranks turbines given the wind direction	2.5
turbulenceAdded.f	Subroutine	Calculates added turbulence	2.4.1
velocityDeficit.f	Subroutine	Calculates velocity deficit	2.4.2
WindFarmModel_main.f	Main		2.5
declarations.inc	Include	Contains declarations of variables and arrays	
parametersConversion.inc	Include	Contains parameter values that remain the same	
parametersCoordinates.inc	Include	Contains coordinates of turbines in the farm	
parametersTurbine.inc	Include	Contains number of turbines in the farm and turbine parameters not being thrust curve	
ThrustCurve.txt	Input	Contains thrust curve of the wind turbine	
WindInput.txt	Input	Sets range of wind speeds, wind directions and turbulence intensities	
flowmap1ave.csv	Output	Contains means of wind, load and power, arranged by turbine	
flowmap2ave.csv	Output	Contains means of wind, load and power, arranged by quantity	
flowmap2std.csv	Output	Contains standard deviations of wind, load and power, arranged by quantity	
flowmap3.csv	Output	Contains means of wind, load and power plus load quantifiers, arranged by quantity	

The source files (comprising the main file, and several subroutine and include files) are needed to build the programme. Running the programme warrants the input files, whereas the output files are created upon running.

2.2 Building the programme

All source files must be in the same directory in order to be compiled and linked. If Visual Fortran is used, clicking `WindFarmModel_main.f` will automatically create a project and work space. Next, the executable is built by clicking the Build All button in the Build menu.

2.3 Running the programme

The programme is run by clicking the Execute button in the Build menu if Visual Fortran is used, or alternatively, by clicking `WindFarmModel_main.exe`. The input files with the thrust curve and the wind input must be in the same directory. Upon running the output files are created in the same directory, and are filled with data.

2.4 Programme input and output

2.4.1 Input

2.4.1a Wind turbine thrust curve

The input file `ThrustCurve.txt` specifies the thrust coefficient as a function of the tip-speed ratio and the blade pitch angle. The format is:

- First line: label, N_{bpa}, bpa[1], ..., bpa[N_{bpa}]
- Second line: N_{tsr}, tsr[N_{tsr},1], ..., tsr[N_{tsr}, N_{bpa}]
- ...
- Last line: 1, tsr[1,1], ..., tsr[1, N_{bpa}]

Here bpa indicates the blade pitch angle (in degree) and tsr indicates the (non-dimensional) tip-speed ratio, whereas label indicates a string that must have the value ct. N_{bpa} and N_{tsr} are the number of blade pitch angles resp. tip-speed ratios in the table, their values must be the same as those specified in the include file `parametersTurbine.inc`.

2.4.1b Other wind turbine data and wind farm data

The remaining wind turbine parameters and one wind farm parameter are contained in the include file `parametersTurbine.inc`:

- Number of output quantities [-]
- Number of blades [-]
- Diameter of the rotor [m]
- Height of the hub[m]
- Drag coefficient of the tower [-]
- Diameter of the tower [m]
- Mass of the nacelle plus rotor [kg]
- Mass of a blade [kg]
- Tower bending angle [deg]
- Mass eccentricity distance [m]
- Cut-in wind speed, nominal wind speed, and cut-out wind speed [m/s]
- Rotor speed at cut-in, nominal and cut-out wind speed [rpm]
- Blade pitch angle at cut-in, nominal and cut-out wind speed [deg]
- Number of turbines in the wind farm [-]

In the Mrt2010 distribution of the programme the number of output quantities is 17 because mean and standard deviation of wind speed, power, rotor thrust, tower bending moment, blade bending moment and rotor shaft torque are considered, as well as the two state parameters rotor speed and blade pitch angle and the three load quantifiers equivalent tower bending moment, equivalent blade bending moment and equivalent rotor shaft torque. Tower bending angle originates from the mass eccentricity of the nacelle plus rotor, and the mass eccentricity distance is the off-axis position of where the mass of the nacelle plus rotor is to be concentrated.

The include file `parametersCoordinates.inc` contains the coordinates of the wind turbines in the wind farm. The format is:

- xTurb(1)= number
- ...
- xTurb(Nturb)= number
- yTurb(1)= number
- ...
- yTurb(Nturb)= number

where number specifies the location (in meter). N_{turb} is the number turbines in the farm as also specified in the include file `parametersTurbine.inc`.

All these parameters are hard set and require rebuilding the executable if modified.

2.4.1c Wind input

Wind input consists of the range of wind speeds, the range of wind directions, and the range of turbulence intensities for which calculations are to be performed. To this end values of the following parameters are set in the input file `WindInput.txt`:

- WSfirst, WSstop, WSincrement [m/s];
- WDfirst, WDstop, WDincrement [deg]; and
- TIfirst, TIstop, TIincrement [-].

Valid ranges are [0 - 25] m/s for the wind speed, [0 - 360] deg for the wind direction, and [0.0 - 0.2] for the turbulence intensity.

2.4.2 Output

The output of the programme comprises a map of wind, loads and energy, or to be more specific, a table with the mean and the standard deviation of the wind speed (ws), the aerodynamic power (pow), the rotor thrust (thr), the tower bending moment (tbm), the blade bending moment (bbm), and the rotor shaft torque (rst) as well as the rotor speed (rsp), the blade pitch angle (bpa), the equivalent tower bending moment (eqtbm), the equivalent blade bending moment (eqbbm) and the equivalent rotor shaft torque (eqrst) for each turbine in the wind farm for the specified values of the ambient wind speed, wind direction and turbulence intensity. The turbine numbering in the table is determined by the order the wind flows through the wind farm for the given wind direction.

The output file `flowmap1ave.csv` contains means arranged by turbine. The first line in this file is a header which identifies the content of the various columns. The second line contains the means for the first group of ambient wind speed, wind direction and turbulence intensity that is considered. The format of this line is:

(wsave1, wdave1, wsstd1), $\quad$ (x, y, wsave, tbmave, bbmave, powave, rstave, thrave)$_1$,
(x, y, ws, tbmave, bbmave, powave, rstave, thrave)$_2$,
... ,
(x, y, ws, tbmave, bbmave, powave, rstave, thrave)$_N$;

where the index indicates the order in which the wind flows past the turbines. The next line contains the means for the second group:

(wsave2, wdave1, wsstd1), etc;

and the lines proceed until the last group is reached:

(wsaveK, wdaveL, wsstdM), etc;

where K, L and M indicate the number of ambient wind speed, wind directions and turbulence intensities that are considered.

The output file `flowmap2ave.csv` on the other hand contains means arranged by quantity. After the first line, which identifies the content of the various columns, lines follow with the format:

(wsave1, wdave1, wsstd1), (x_1,x_2,...,x_N), (y_1,y_2,...,y_N), ($wsave_1$,$wsave_2$,...,$wsave_N$), ,($thrave_1$,$thrave_2$,...,$thrave_N$).

The output file `flowmap2std.csv` contains standard deviations arranged by quantity and has the same structure.

The output file `flowmap3.csv` contains turbine state, power, loads and load quantifiers arranged by quantity with the following structure:

(wsave1, wdave1, wsstd1), (x_1,x_2,...,x_N), (y_1,y_2,...,y_N),
($bpaave_1$,$bpaave_2$,...,$bpaave_N$), ($wsave_1$,$wsave_2$,...,$wsave_N$), ($rspave_1$,$rspave_2$,...,$rspave_N$),
($powave_1$,$powave_2$,...,$powave_N$), ($thrave_1$,$thrave_2$,...,$thrave_N$),
($eqtbm_1$,$eqtbm_2$,...,$eqtbm_N$), ($eqbbm_1$,$eqbbm_2$,...,$eqbbm_N$), ($eqrst_1$,$eqrst_2$,...,$eqrst_N$).

3 Maintenance

3.1 Change of input

3.1.1 Wind farm

In order to build the programme for another wind farm the number of turbines and their coordinates must be modified in the following files:

- `parametersCoordinates.inc`, and
- `parametersTurbine.inc`.

In the Mrt2010 distribution of the programme the ESWF is the default wind farm, but files are provided to build the programme for the EWTW.

3.1.2 Wind turbine

In order to run the programme for another wind turbine, the turbine parameters and the thrust coefficients must be modified in the following files:

- `parametersTurbine.inc`, and
- `ThrustCurve.txt`.

In the Mrt2010 distribution of the programme the Aircon 10P is the default wind turbine as it is linked to the ESWF. In order to run the programme for the EWTW a public thrust curve of the Nordex N80 is provided.

3.2 Change of level of detail of output

3.2.1 Wind speed

The wind speeds to be considered can be set by changing the wind speed range and the wind speed increment in the input file `WindInput.txt`. For example with WS_{first} = 0 m/s, WS_{last} = 25 m/s and $WS_{increment}$ = 1 m/s a flow map with 26 wind speed bins is created.

3.2.2 Wind direction

The wind directions to be considered can be set by changing the wind direction range and the wind direction increment in the input file `WindInput.txt`. For example with WD_{first} = 0 deg, WD_{last} = 360 deg and $WD_{increment}$ = 15 deg a flow map with 24 wind direction sectors is created.

3.2.3 Turbulence intensity

The turbulence intensities to be considered can be set by changing the turbulence intensity range and the turbulence intensity increment in the input file `WindInput.txt`. For example flow maps valid for turbulence intensities of 0%, 5%, 10%, 15% and 20% are created with TI_{first} = 0.0, TI_{last} = 0.2 and $TI_{increment}$ = 0.05.

4 Example

Flow maps `flowmap2ave.csv`, `flowmap2std.csv` and `flowmap3.csv` for the EWTW as created with wind input:

- WS_{first} = 1 m/s, WS_{last} = 25 m/s and $WS_{increment}$ = 5 m/s;
- WD_{first} = 0 deg, WD_{last} = 270 deg and $WD_{increment}$ = 90 deg; and
- TI_{first} = 0.05, TI_{last} = 0.10 and $TI_{increment}$ = 0.025.

flowmap2ave.csv:

wsave [m/	wsstd [m/	wdave [de	x [m]					y [m]					wsaveloc					tbmomav					bbmoma					powave [					rstorqave					thrustave				
1	0.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1	1	1	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	0.3	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	6	6	6	6	6.21E+03	6.21E+03	6.21E+03	6.21E+03	6.21E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.48E+02	2.48E+02	2.48E+02	2.48E+02	2.48E+02	1.92E+02	1.92E+02	1.92E+02	1.92E+02	1.92E+02	4.69E+01	4.69E+01	4.69E+01	4.69E+01	4.69E+01
6	0.3	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	5.608	5.539	5.511	5.495	6.21E+03	5.60E+03	5.49E+03	5.44E+03	5.41E+03	1.30E+03	1.23E+03	1.21E+03	1.21E+03	1.21E+03	2.48E+02	2.02E+02	1.93E+02	1.89E+02	1.87E+02	1.92E+02	1.58E+02	1.52E+02	1.49E+02	1.47E+02	4.69E+01	3.95E+01	3.81E+01	3.75E+01	3.72E+01
6	0.3	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	6	6	6	6	6.21E+03	6.21E+03	6.21E+03	6.21E+03	6.21E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.48E+02	2.48E+02	2.48E+02	2.48E+02	2.48E+02	1.92E+02	1.92E+02	1.92E+02	1.92E+02	1.92E+02	4.69E+01	4.69E+01	4.69E+01	4.69E+01	4.69E+01
6	0.3	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	5.608	5.541	5.509	5.494	6.21E+03	5.60E+03	5.49E+03	5.44E+03	5.41E+03	1.30E+03	1.23E+03	1.21E+03	1.21E+03	1.21E+03	2.48E+02	2.02E+02	1.93E+02	1.89E+02	1.87E+02	1.92E+02	1.58E+02	1.52E+02	1.49E+02	1.47E+02	4.69E+01	3.95E+01	3.81E+01	3.75E+01	3.72E+01
6	0.45	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	6	6	6	6	6.19E+03	6.19E+03	6.19E+03	6.19E+03	6.19E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.47E+02	2.47E+02	2.47E+02	2.47E+02	2.47E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	4.66E+01	4.66E+01	4.66E+01	4.66E+01	4.66E+01
6	0.45	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	5.61	5.542	5.515	5.498	6.19E+03	5.57E+03	5.46E+03	5.41E+03	5.38E+03	1.30E+03	1.23E+03	1.21E+03	1.21E+03	1.20E+03	2.47E+02	2.00E+02	1.91E+02	1.88E+02	1.86E+02	1.91E+02	1.57E+02	1.50E+02	1.48E+02	1.46E+02	4.66E+01	3.92E+01	3.78E+01	3.72E+01	3.68E+01
6	0.45	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	6	6	6	6	6.19E+03	6.19E+03	6.19E+03	6.19E+03	6.19E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.47E+02	2.47E+02	2.47E+02	2.47E+02	2.47E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	4.66E+01	4.66E+01	4.66E+01	4.66E+01	4.66E+01
6	0.45	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	5.61	5.544	5.513	5.498	6.19E+03	5.57E+03	5.46E+03	5.41E+03	5.38E+03	1.30E+03	1.23E+03	1.21E+03	1.21E+03	1.20E+03	2.47E+02	2.00E+02	1.92E+02	1.88E+02	1.86E+02	1.91E+02	1.57E+02	1.50E+02	1.47E+02	1.46E+02	4.66E+01	3.92E+01	3.78E+01	3.72E+01	3.68E+01
6	0.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	6	6	6	6	6.16E+03	6.16E+03	6.16E+03	6.16E+03	6.16E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.45E+02	2.45E+02	2.45E+02	2.45E+02	2.45E+02	1.90E+02	1.90E+02	1.90E+02	1.90E+02	1.90E+02	4.63E+01	4.63E+01	4.63E+01	4.63E+01	4.63E+01
6	0.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	5.613	5.546	5.519	5.503	6.16E+03	5.53E+03	5.42E+03	5.37E+03	5.34E+03	1.30E+03	1.22E+03	1.21E+03	1.20E+03	1.20E+03	2.45E+02	1.98E+02	1.89E+02	1.86E+02	1.83E+02	1.90E+02	1.55E+02	1.48E+02	1.46E+02	1.44E+02	4.63E+01	3.87E+01	3.73E+01	3.67E+01	3.64E+01
6	0.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	6	6	6	6	6	6.16E+03	6.16E+03	6.16E+03	6.16E+03	6.16E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	1.30E+03	2.45E+02	2.45E+02	2.45E+02	2.45E+02	2.45E+02	1.90E+02	1.90E+02	1.90E+02	1.90E+02	1.90E+02	4.63E+01	4.63E+01	4.63E+01	4.63E+01	4.63E+01
6	0.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	6	5.613	5.548	5.517	5.503	6.16E+03	5.53E+03	5.42E+03	5.37E+03	5.34E+03	1.30E+03	1.22E+03	1.21E+03	1.20E+03	1.20E+03	2.45E+02	1.98E+02	1.89E+02	1.85E+02	1.83E+02	1.90E+02	1.55E+02	1.49E+02	1.46E+02	1.44E+02	4.63E+01	3.87E+01	3.73E+01	3.67E+01	3.64E+01
11	0.55	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	11	11	11	11	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.29E+03	3.29E+03	3.29E+03	3.29E+03	3.29E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.76E+02
11	0.55	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	10.176	9.936	9.842	9.79	1.69E+04	1.53E+04	1.48E+04	1.46E+04	1.45E+04	3.29E+03	2.97E+03	2.87E+03	2.83E+03	2.81E+03	1.67E+03	1.37E+03	1.29E+03	1.25E+03	1.24E+03	1.06E+03	8.91E+02	8.44E+02	8.26E+02	8.16E+02	1.76E+02	1.57E+02	1.51E+02	1.49E+02	1.47E+02
11	0.55	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	11	11	11	11	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.29E+03	3.29E+03	3.29E+03	3.29E+03	3.29E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.76E+02
11	0.55	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	10.176	9.941	9.838	9.789	1.69E+04	1.53E+04	1.48E+04	1.46E+04	1.45E+04	3.29E+03	2.97E+03	2.87E+03	2.83E+03	2.81E+03	1.67E+03	1.37E+03	1.29E+03	1.25E+03	1.24E+03	1.06E+03	8.91E+02	8.45E+02	8.25E+02	8.16E+02	1.76E+02	1.57E+02	1.51E+02	1.49E+02	1.47E+02
11	0.825	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	11	11	11	11	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.26E+03	3.26E+03	3.26E+03	3.26E+03	3.26E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.75E+02
11	0.825	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	10.178	9.938	9.846	9.794	1.68E+04	1.52E+04	1.47E+04	1.45E+04	1.44E+04	3.26E+03	2.94E+03	2.85E+03	2.81E+03	2.78E+03	1.66E+03	1.35E+03	1.27E+03	1.24E+03	1.23E+03	1.05E+03	8.81E+02	8.36E+02	8.19E+02	8.09E+02	1.75E+02	1.56E+02	1.50E+02	1.47E+02	1.46E+02
11	0.825	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	11	11	11	11	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.26E+03	3.26E+03	3.26E+03	3.26E+03	3.26E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.75E+02
11	0.825	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	10.178	9.943	9.842	9.793	1.68E+04	1.52E+04	1.47E+04	1.45E+04	1.44E+04	3.26E+03	2.94E+03	2.85E+03	2.80E+03	2.78E+03	1.66E+03	1.35E+03	1.28E+03	1.24E+03	1.23E+03	1.05E+03	8.81E+02	8.37E+02	8.18E+02	8.08E+02	1.75E+02	1.56E+02	1.50E+02	1.47E+02	1.46E+02
11	1.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	11	11	11	11	1.66E+04	1.66E+04	1.66E+04	1.66E+04	1.66E+04	3.22E+03	3.22E+03	3.22E+03	3.22E+03	3.22E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.03E+03	1.03E+03	1.03E+03	1.03E+03	1.03E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02
11	1.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	10.181	9.941	9.851	9.8	1.66E+04	1.50E+04	1.45E+04	1.43E+04	1.42E+04	3.22E+03	2.91E+03	2.81E+03	2.78E+03	2.75E+03	1.64E+03	1.34E+03	1.26E+03	1.23E+03	1.21E+03	1.03E+03	8.70E+02	8.26E+02	8.08E+02	7.98E+02	1.72E+02	1.54E+02	1.48E+02	1.45E+02	1.44E+02
11	1.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11	11	11	11	11	1.66E+04	1.66E+04	1.66E+04	1.66E+04	1.66E+04	3.22E+03	3.22E+03	3.22E+03	3.22E+03	3.22E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.03E+03	1.03E+03	1.03E+03	1.03E+03	1.03E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02
11	1.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11	10.181	9.946	9.847	9.799	1.66E+04	1.50E+04	1.45E+04	1.43E+04	1.42E+04	3.22E+03	2.91E+03	2.82E+03	2.77E+03	2.75E+03	1.64E+03	1.34E+03	1.26E+03	1.23E+03	1.21E+03	1.03E+03	8.70E+02	8.26E+02	8.07E+02	7.98E+02	1.72E+02	1.54E+02	1.48E+02	1.45E+02	1.44E+02
16	0.8	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	16	16	16	16	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	3.13E+03	3.13E+03	3.13E+03	3.13E+03	3.13E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.67E+02
16	0.8	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	15.502	15.298	15.197	15.135	1.67E+04	1.72E+04	1.74E+04	1.75E+04	1.76E+04	3.13E+03	3.25E+03	3.30E+03	3.33E+03	3.34E+03	2.50E+03	2.51E+03	2.50E+03	2.50E+03	2.50E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03	1.67E+02	1.74E+02	1.77E+02	1.79E+02	1.79E+02
16	0.8	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	16	16	16	16	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	3.13E+03	3.13E+03	3.13E+03	3.13E+03	3.13E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.67E+02
16	0.8	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	15.502	15.301	15.194	15.135	1.67E+04	1.72E+04	1.74E+04	1.75E+04	1.76E+04	3.13E+03	3.25E+03	3.30E+03	3.33E+03	3.34E+03	2.50E+03	2.51E+03	2.50E+03	2.50E+03	2.50E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03	1.67E+02	1.74E+02	1.77E+02	1.79E+02	1.79E+02
16	1.2	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	16	16	16	16	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.17E+03	3.17E+03	3.17E+03	3.17E+03	3.17E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.69E+02
16	1.2	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	15.482	15.268	15.162	15.097	1.69E+04	1.74E+04	1.76E+04	1.77E+04	1.77E+04	3.17E+03	3.29E+03	3.34E+03	3.36E+03	3.37E+03	2.51E+03	2.51E+03	2.50E+03	2.50E+03	2.49E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03	1.69E+02	1.76E+02	1.79E+02	1.81E+02	1.81E+02
16	1.2	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	16	16	16	16	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.17E+03	3.17E+03	3.17E+03	3.17E+03	3.17E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.69E+02
16	1.2	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	15.482	15.271	15.159	15.097	1.69E+04	1.74E+04	1.76E+04	1.77E+04	1.77E+04	3.17E+03	3.29E+03	3.34E+03	3.36E+03	3.37E+03	2.51E+03	2.51E+03	2.50E+03	2.50E+03	2.49E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03	1.69E+02	1.76E+02	1.79E+02	1.81E+02	1.81E+02
16	1.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	16	16	16	16	1.71E+04	1.71E+04	1.71E+04	1.71E+04	1.71E+04	3.21E+03	3.21E+03	3.21E+03	3.21E+03	3.21E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02
16	1.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	15.454	15.225	15.116	15.053	1.71E+04	1.76E+04	1.77E+04	1.77E+04	1.77E+04	3.21E+03	3.34E+03	3.37E+03	3.37E+03	3.38E+03	2.52E+03	2.51E+03	2.49E+03	2.47E+03	2.46E+03	1.35E+03	1.37E+03	1.37E+03	1.36E+03	1.36E+03	1.72E+02	1.79E+02	1.81E+02	1.81E+02	1.81E+02
16	1.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	16	16	16	16	16	1.71E+04	1.71E+04	1.71E+04	1.71E+04	1.71E+04	3.21E+03	3.21E+03	3.21E+03	3.21E+03	3.21E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02
16	1.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	16	15.454	15.229	15.114	15.052	1.71E+04	1.76E+04	1.77E+04	1.77E+04	1.77E+04	3.21E+03	3.34E+03	3.37E+03	3.37E+03	3.38E+03	2.52E+03	2.51E+03	2.49E+03	2.47E+03	2.46E+03	1.35E+03	1.37E+03	1.37E+03	1.36E+03	1.36E+03	1.72E+02	1.79E+02	1.81E+02	1.81E+02	1.81E+02
21	1.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	21	21	21	21	1.39E+04	1.39E+04	1.39E+04	1.39E+04	1.39E+04	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02
21	1.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	20.735	20.642	20.6	20.575	1.39E+04	1.40E+04	1.41E+04	1.41E+04	1.41E+04	2.40E+03	2.43E+03	2.44E+03	2.44E+03	2.45E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.25E+02	1.25E+02	1.26E+02	1.26E+02
21	1.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	21	21	21	21	1.39E+04	1.39E+04	1.39E+04	1.39E+04	1.39E+04	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02
21	1.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	20.735	20.644	20.599	20.575	1.39E+04	1.40E+04	1.41E+04	1.41E+04	1.41E+04	2.40E+03	2.43E+03	2.44E+03	2.44E+03	2.45E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.25E+02	1.25E+02	1.26E+02	1.26E+02
21	1.575	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	21	21	21	21	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02
21	1.575	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	20.731	20.637	20.595	20.57	1.40E+04	1.41E+04	1.41E+04	1.41E+04	1.41E+04	2.40E+03	2.44E+03	2.45E+03	2.45E+03	2.46E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.25E+02	1.26E+02	1.26E+02	1.26E+02
21	1.575	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	21	21	21	21	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.40E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02
21	1.575	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	20.731	20.639	20.593	20.569	1.40E+04	1.41E+04	1.41E+04	1.41E+04	1.41E+04	2.40E+03	2.44E+03	2.45E+03	2.45E+03	2.46E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.23E+02	1.25E+02	1.26E+02	1.26E+02	1.26E+02
21	2.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	21	21	21	21	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.24E+02
21	2.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	20.726	20.63	20.587	20.561	1.40E+04	1.41E+04	1.42E+04	1.42E+04	1.42E+04	2.41E+03	2.45E+03	2.46E+03	2.46E+03	2.47E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.25E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.24E+02	1.26E+02	1.26E+02	1.27E+02	1.27E+02
21	2.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	21	21	21	21	21	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.24E+02
21	2.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	21	20.726	20.632	20.586	20.561	1.40E+04	1.41E+04	1.42E+04	1.42E+04	1.42E+04	2.41E+03	2.45E+03	2.46E+03	2.46E+03	2.47E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.25E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.24E+02	1.26E+02	1.26E+02	1.27E+02	1.27E+02

flowmap2std.csv:

wsave [m/s	wsstd [m/s	wdave [de	x [m]					y [m]					wsstdloc					tbmomst					bbmoms					powstd [					rstorqstd					thruststd				
1	0.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.05	0.05	0.05	0.05	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.05	0.05	0.05	0.05	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.05	0.05	0.05	0.05	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.05	0.05	0.05	0.05	0.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.075	0.075	0.075	0.075	0.075	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.075	0.075	0.075	0.075	0.075	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.075	0.075	0.075	0.075	0.075	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.075	0.075	0.075	0.075	0.075	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.1	0.1	0.1	0.1	0.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.1	0.1	0.1	0.1	0.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.1	0.1	0.1	0.1	0.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.1	0.1	0.1	0.1	0.1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	0.3	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.3	0.3	0.3	0.3	0.3	3.22E+02	3.22E+02	3.22E+02	3.22E+02	3.22E+02	4.65E+01	4.65E+01	4.65E+01	4.65E+01	4.65E+01	2.80E+01	2.80E+01	2.80E+01	2.80E+01	2.80E+01	1.98E+01	1.98E+01	1.98E+01	1.98E+01	1.98E+01	3.92E+00	3.92E+00	3.92E+00	3.92E+00	3.92E+00
6	0.3	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.3	0.365	0.354	0.352	0.351	3.22E+02	3.84E+02	3.70E+02	3.67E+02	3.66E+02	4.65E+01	5.05E+01	4.76E+01	4.67E+01	4.63E+01	2.80E+01	3.16E+01	3.00E+01	2.96E+01	2.94E+01	1.98E+01	2.27E+01	2.17E+01	2.14E+01	2.13E+01	3.92E+00	4.68E+00	4.51E+00	4.47E+00	4.45E+00
6	0.3	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.3	0.3	0.3	0.3	0.3	3.22E+02	3.22E+02	3.22E+02	3.22E+02	3.22E+02	4.65E+01	4.65E+01	4.65E+01	4.65E+01	4.65E+01	2.80E+01	2.80E+01	2.80E+01	2.80E+01	2.80E+01	1.98E+01	1.98E+01	1.98E+01	1.98E+01	1.98E+01	3.92E+00	3.92E+00	3.92E+00	3.92E+00	3.92E+00
6	0.3	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.3	0.366	0.354	0.352	0.351	3.22E+02	3.84E+02	3.70E+02	3.67E+02	3.66E+02	4.65E+01	5.05E+01	4.76E+01	4.67E+01	4.63E+01	2.80E+01	3.16E+01	3.00E+01	2.96E+01	2.94E+01	1.98E+01	2.27E+01	2.17E+01	2.14E+01	2.13E+01	3.92E+00	4.68E+00	4.51E+00	4.47E+00	4.45E+00
6	0.45	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.45	0.45	0.45	0.45	0.45	4.82E+02	4.82E+02	4.82E+02	4.82E+02	4.82E+02	6.94E+01	6.94E+01	6.94E+01	6.94E+01	6.94E+01	4.18E+01	4.18E+01	4.18E+01	4.18E+01	4.18E+01	2.96E+01	2.96E+01	2.96E+01	2.96E+01	2.96E+01	5.86E+00	5.86E+00	5.86E+00	5.86E+00	5.86E+00
6	0.45	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.45	0.496	0.488	0.486	0.486	4.82E+02	5.19E+02	5.07E+02	5.04E+02	5.02E+02	6.94E+01	6.79E+01	6.48E+01	6.38E+01	6.32E+01	4.18E+01	4.25E+01	4.10E+01	4.05E+01	4.02E+01	2.96E+01	3.06E+01	2.96E+01	2.93E+01	2.92E+01	5.86E+00	6.32E+00	6.17E+00	6.13E+00	6.12E+00
6	0.45	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.45	0.45	0.45	0.45	0.45	4.82E+02	4.82E+02	4.82E+02	4.82E+02	4.82E+02	6.94E+01	6.94E+01	6.94E+01	6.94E+01	6.94E+01	4.18E+01	4.18E+01	4.18E+01	4.18E+01	4.18E+01	2.96E+01	2.96E+01	2.96E+01	2.96E+01	2.96E+01	5.86E+00	5.86E+00	5.86E+00	5.86E+00	5.86E+00
6	0.45	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.45	0.496	0.487	0.486	0.486	4.82E+02	5.19E+02	5.07E+02	5.04E+02	5.02E+02	6.94E+01	6.79E+01	6.49E+01	6.38E+01	6.32E+01	4.18E+01	4.25E+01	4.10E+01	4.05E+01	4.02E+01	2.96E+01	3.06E+01	2.96E+01	2.93E+01	2.92E+01	5.86E+00	6.32E+00	6.17E+00	6.13E+00	6.11E+00
6	0.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.6	0.6	0.6	0.6	0.6	6.40E+02	6.40E+02	6.40E+02	6.40E+02	6.40E+02	9.18E+01	9.18E+01	9.18E+01	9.18E+01	9.18E+01	5.54E+01	5.54E+01	5.54E+01	5.54E+01	5.54E+01	3.93E+01	3.93E+01	3.93E+01	3.93E+01	3.93E+01	7.79E+00	7.79E+00	7.79E+00	7.79E+00	7.79E+00
6	0.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.6	0.635	0.629	0.627	0.627	6.40E+02	6.59E+02	6.48E+02	6.44E+02	6.43E+02	9.18E+01	8.57E+01	8.23E+01	8.11E+01	8.03E+01	5.54E+01	5.38E+01	5.21E+01	5.16E+01	5.12E+01	3.93E+01	3.88E+01	3.78E+01	3.74E+01	3.72E+01	7.79E+00	8.03E+00	7.89E+00	7.85E+00	7.83E+00
6	0.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.6	0.6	0.6	0.6	0.6	6.40E+02	6.40E+02	6.40E+02	6.40E+02	6.40E+02	9.18E+01	9.18E+01	9.18E+01	9.18E+01	9.18E+01	5.54E+01	5.54E+01	5.54E+01	5.54E+01	5.54E+01	3.93E+01	3.93E+01	3.93E+01	3.93E+01	3.93E+01	7.79E+00	7.79E+00	7.79E+00	7.79E+00	7.79E+00
6	0.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.6	0.635	0.628	0.627	0.627	6.40E+02	6.60E+02	6.48E+02	6.45E+02	6.43E+02	9.18E+01	8.57E+01	8.23E+01	8.10E+01	8.03E+01	5.54E+01	5.38E+01	5.22E+01	5.15E+01	5.12E+01	3.93E+01	3.88E+01	3.78E+01	3.74E+01	3.72E+01	7.79E+00	8.03E+00	7.89E+00	7.85E+00	7.83E+00
11	0.55	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.55	0.55	0.55	0.55	0.55	6.42E+02	6.42E+02	6.42E+02	6.42E+02	6.42E+02	1.28E+02	1.28E+02	1.28E+02	1.28E+02	1.28E+02	1.44E+02	1.44E+02	1.44E+02	1.44E+02	1.44E+02	7.44E+01	7.44E+01	7.44E+01	7.44E+01	7.44E+01	7.56E+00	7.56E+00	7.56E+00	7.56E+00	7.56E+00
11	0.55	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.55	0.686	0.675	0.67	0.669	6.42E+02	9.88E+02	1.01E+03	1.01E+03	1.01E+03	1.28E+02	1.98E+02	2.02E+02	2.02E+02	2.02E+02	1.44E+02	1.76E+02	1.70E+02	1.68E+02	1.67E+02	7.44E+01	9.71E+01	9.56E+01	9.45E+01	9.42E+01	7.56E+00	1.18E+01	1.21E+01	1.21E+01	1.22E+01
11	0.55	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.55	0.55	0.55	0.55	0.55	6.42E+02	6.42E+02	6.42E+02	6.42E+02	6.42E+02	1.28E+02	1.28E+02	1.28E+02	1.28E+02	1.28E+02	1.44E+02	1.44E+02	1.44E+02	1.44E+02	1.44E+02	7.44E+01	7.44E+01	7.44E+01	7.44E+01	7.44E+01	7.56E+00	7.56E+00	7.56E+00	7.56E+00	7.56E+00
11	0.55	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.55	0.686	0.674	0.671	0.669	6.42E+02	9.88E+02	1.01E+03	1.01E+03	1.01E+03	1.28E+02	1.98E+02	2.02E+02	2.02E+02	2.02E+02	1.44E+02	1.76E+02	1.70E+02	1.68E+02	1.66E+02	7.44E+01	9.71E+01	9.55E+01	9.46E+01	9.41E+01	7.56E+00	1.18E+01	1.21E+01	1.22E+01	1.22E+01
11	0.825	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.825	0.825	0.825	0.825	0.825	9.74E+02	9.74E+02	9.74E+02	9.74E+02	9.74E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	2.15E+02	2.15E+02	2.15E+02	2.15E+02	2.15E+02	1.11E+02	1.11E+02	1.11E+02	1.11E+02	1.11E+02	1.15E+01	1.15E+01	1.15E+01	1.15E+01	1.15E+01
11	0.825	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.825	0.921	0.913	0.909	0.908	9.74E+02	1.34E+03	1.37E+03	1.37E+03	1.37E+03	1.94E+02	2.68E+02	2.73E+02	2.73E+02	2.74E+02	2.15E+02	2.35E+02	2.29E+02	2.26E+02	2.24E+02	1.11E+02	1.30E+02	1.29E+02	1.28E+02	1.27E+02	1.15E+01	1.61E+01	1.64E+01	1.65E+01	1.65E+01
11	0.825	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.825	0.825	0.825	0.825	0.825	9.74E+02	9.74E+02	9.74E+02	9.74E+02	9.74E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	2.15E+02	2.15E+02	2.15E+02	2.15E+02	2.15E+02	1.11E+02	1.11E+02	1.11E+02	1.11E+02	1.11E+02	1.15E+01	1.15E+01	1.15E+01	1.15E+01	1.15E+01
11	0.825	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.825	0.921	0.912	0.91	0.908	9.74E+02	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.94E+02	2.68E+02	2.73E+02	2.73E+02	2.74E+02	2.15E+02	2.35E+02	2.29E+02	2.26E+02	2.24E+02	1.11E+02	1.30E+02	1.29E+02	1.28E+02	1.27E+02	1.15E+01	1.61E+01	1.64E+01	1.65E+01	1.65E+01
11	1.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.1	1.1	1.1	1.1	1.1	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	2.63E+02	2.63E+02	2.63E+02	2.63E+02	2.63E+02	2.85E+02	2.85E+02	2.85E+02	2.85E+02	2.85E+02	1.48E+02	1.48E+02	1.48E+02	1.48E+02	1.48E+02	1.56E+01	1.56E+01	1.56E+01	1.56E+01	1.56E+01
11	1.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.1	1.174	1.167	1.164	1.163	1.32E+03	1.72E+03	1.74E+03	1.75E+03	1.76E+03	2.63E+02	3.45E+02	3.48E+02	3.49E+02	3.50E+02	2.85E+02	2.97E+02	2.89E+02	2.86E+02	2.84E+02	1.48E+02	1.65E+02	1.63E+02	1.62E+02	1.61E+02	1.56E+01	2.07E+01	2.10E+01	2.11E+01	2.12E+01
11	1.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.1	1.1	1.1	1.1	1.1	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	2.63E+02	2.63E+02	2.63E+02	2.63E+02	2.63E+02	2.85E+02	2.85E+02	2.85E+02	2.85E+02	2.85E+02	1.48E+02	1.48E+02	1.48E+02	1.48E+02	1.48E+02	1.56E+01	1.56E+01	1.56E+01	1.56E+01	1.56E+01
11	1.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.1	1.174	1.167	1.165	1.163	1.32E+03	1.72E+03	1.74E+03	1.75E+03	1.76E+03	2.63E+02	3.45E+02	3.48E+02	3.49E+02	3.50E+02	2.85E+02	2.97E+02	2.89E+02	2.86E+02	2.84E+02	1.48E+02	1.65E+02	1.63E+02	1.62E+02	1.61E+02	1.56E+01	2.07E+01	2.10E+01	2.11E+01	2.12E+01
16	0.8	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.8	0.8	0.8	0.8	0.8	6.55E+02	6.55E+02	6.55E+02	6.55E+02	6.55E+02	1.59E+02	1.59E+02	1.59E+02	1.59E+02	1.59E+02	8.50E+00	8.50E+00	8.50E+00	8.50E+00	8.50E+00	3.04E+01	3.04E+01	3.04E+01	3.04E+01	3.04E+01	9.43E+00	9.43E+00	9.43E+00	9.43E+00	9.43E+00
16	0.8	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.8	0.888	0.893	0.895	0.896	6.55E+02	8.23E+02	8.71E+02	8.93E+02	9.08E+02	1.59E+02	1.96E+02	2.06E+02	2.11E+02	2.14E+02	8.50E+00	4.19E+00	2.96E+00	3.49E+00	4.16E+00	3.04E+01	3.62E+01	3.75E+01	3.82E+01	3.86E+01	9.43E+00	1.16E+01	1.22E+01	1.24E+01	1.26E+01
16	0.8	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0.8	0.8	0.8	0.8	0.8	6.55E+02	6.55E+02	6.55E+02	6.55E+02	6.55E+02	1.59E+02	1.59E+02	1.59E+02	1.59E+02	1.59E+02	8.50E+00	8.50E+00	8.50E+00	8.50E+00	8.50E+00	3.04E+01	3.04E+01	3.04E+01	3.04E+01	3.04E+01	9.43E+00	9.43E+00	9.43E+00	9.43E+00	9.43E+00
16	0.8	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0.8	0.888	0.893	0.895	0.896	6.55E+02	8.23E+02	8.69E+02	8.94E+02	9.09E+02	1.59E+02	1.96E+02	2.06E+02	2.11E+02	2.14E+02	8.50E+00	4.19E+00	2.95E+00	3.51E+00	4.17E+00	3.04E+01	3.62E+01	3.75E+01	3.82E+01	3.86E+01	9.43E+00	1.16E+01	1.21E+01	1.25E+01	1.26E+01
16	1.2	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.2	1.2	1.2	1.2	1.2	1.01E+03	1.01E+03	1.01E+03	1.01E+03	1.01E+03	2.43E+02	2.43E+02	2.43E+02	2.43E+02	2.43E+02	1.62E+01	1.62E+01	1.62E+01	1.62E+01	1.62E+01	4.62E+01	4.62E+01	4.62E+01	4.62E+01	4.62E+01	1.44E+01	1.44E+01	1.44E+01	1.44E+01	1.44E+01
16	1.2	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.2	1.262	1.267	1.268	1.269	1.01E+03	1.20E+03	1.27E+03	1.27E+03	1.25E+03	2.43E+02	2.85E+02	3.00E+02	3.00E+02	2.94E+02	1.62E+01	5.85E+00	5.34E+00	7.93E+00	1.59E+01	4.62E+01	5.21E+01	5.41E+01	5.30E+01	5.08E+01	1.44E+01	1.68E+01	1.76E+01	1.77E+01	1.73E+01
16	1.2	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.2	1.2	1.2	1.2	1.2	1.01E+03	1.01E+03	1.01E+03	1.01E+03	1.01E+03	2.43E+02	2.43E+02	2.43E+02	2.43E+02	2.43E+02	1.62E+01	1.62E+01	1.62E+01	1.62E+01	1.62E+01	4.62E+01	4.62E+01	4.62E+01	4.62E+01	4.62E+01	1.44E+01	1.44E+01	1.44E+01	1.44E+01	1.44E+01
16	1.2	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.2	1.262	1.266	1.268	1.269	1.01E+03	1.20E+03	1.27E+03	1.27E+03	1.24E+03	2.43E+02	2.85E+02	2.99E+02	3.00E+02	2.94E+02	1.62E+01	5.85E+00	5.28E+00	8.18E+00	1.60E+01	4.62E+01	5.21E+01	5.40E+01	5.29E+01	5.08E+01	1.44E+01	1.68E+01	1.76E+01	1.76E+01	1.73E+01
16	1.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.6	1.6	1.6	1.6	1.6	1.39E+03	1.39E+03	1.39E+03	1.39E+03	1.39E+03	3.33E+02	3.33E+02	3.33E+02	3.33E+02	3.33E+02	2.34E+01	2.34E+01	2.34E+01	2.34E+01	2.34E+01	6.24E+01	6.24E+01	6.24E+01	6.24E+01	6.24E+01	1.97E+01	1.97E+01	1.97E+01	1.97E+01	1.97E+01
16	1.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.6	1.65	1.654	1.654	1.654	1.39E+03	1.63E+03	1.61E+03	1.56E+03	1.54E+03	3.33E+02	3.84E+02	3.80E+02	3.70E+02	3.66E+02	2.34E+01	6.22E+00	2.89E+01	5.55E+01	7.20E+01	6.24E+01	6.94E+01	6.67E+01	6.65E+01	6.82E+01	1.97E+01	2.26E+01	2.24E+01	2.18E+01	2.16E+01
16	1.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.6	1.6	1.6	1.6	1.6	1.39E+03	1.39E+03	1.39E+03	1.39E+03	1.39E+03	3.33E+02	3.33E+02	3.33E+02	3.33E+02	3.33E+02	2.34E+01	2.34E+01	2.34E+01	2.34E+01	2.34E+01	6.24E+01	6.24E+01	6.24E+01	6.24E+01	6.24E+01	1.97E+01	1.97E+01	1.97E+01	1.97E+01	1.97E+01
16	1.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.6	1.65	1.653	1.654	1.654	1.39E+03	1.63E+03	1.61E+03	1.56E+03	1.54E+03	3.33E+02	3.84E+02	3.80E+02	3.70E+02	3.66E+02	2.34E+01	6.22E+00	2.81E+01	5.63E+01	7.22E+01	6.24E+01	6.94E+01	6.68E+01	6.65E+01	6.82E+01	1.97E+01	2.26E+01	2.24E+01	2.18E+01	2.16E+01
21	1.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.05	1.05	1.05	1.05	1.05	1.96E+02	1.96E+02	1.96E+02	1.96E+02	1.96E+02	5.75E+01	5.75E+01	5.75E+01	5.75E+01	5.75E+01	6.79E+00	6.79E+00	6.79E+00	6.79E+00	6.79E+00	3.40E+00	3.40E+00	3.40E+00	3.40E+00	3.40E+00	3.56E+00	3.56E+00	3.56E+00	3.56E+00	3.56E+00
21	1.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.05	1.098	1.1	1.099	1.1	1.96E+02	2.12E+02	2.15E+02	2.16E+02	2.17E+02	5.75E+01	6.15E+01	6.21E+01	6.23E+01	6.25E+01	6.79E+00	6.43E+00	6.20E+00	6.08E+00	6.02E+00	3.40E+00	3.22E+00	3.10E+00	3.04E+00	3.01E+00	3.56E+00	3.80E+00	3.83E+00	3.84E+00	3.85E+00
21	1.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.05	1.05	1.05	1.05	1.05	1.96E+02	1.96E+02	1.96E+02	1.96E+02	1.96E+02	5.75E+01	5.75E+01	5.75E+01	5.75E+01	5.75E+01	6.79E+00	6.79E+00	6.79E+00	6.79E+00	6.79E+00	3.40E+00	3.40E+00	3.40E+00	3.40E+00	3.40E+00	3.56E+00	3.56E+00	3.56E+00	3.56E+00	3.56E+00
21	1.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.05	1.098	1.099	1.1	1.1	1.96E+02	2.12E+02	2.15E+02	2.16E+02	2.17E+02	5.75E+01	6.15E+01	6.21E+01	6.23E+01	6.25E+01	6.79E+00	6.43E+00	6.20E+00	6.08E+00	6.02E+00	3.40E+00	3.22E+00	3.10E+00	3.04E+00	3.01E+00	3.56E+00	3.80E+00	3.83E+00	3.84E+00	3.85E+00
21	1.575	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.575	1.575	1.575	1.575	1.575	2.95E+02	2.95E+02	2.95E+02	2.95E+02	2.95E+02	8.65E+01	8.65E+01	8.65E+01	8.65E+01	8.65E+01	1.01E+01	1.01E+01	1.01E+01	1.01E+01	1.01E+01	5.05E+00	5.05E+00	5.05E+00	5.05E+00	5.05E+00	5.35E+00	5.35E+00	5.35E+00	5.35E+00	5.35E+00
21	1.575	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.575	1.608	1.609	1.609	1.609	2.95E+02	3.12E+02	3.16E+02	3.18E+02	3.19E+02	8.65E+01	9.03E+01	9.11E+01	9.14E+01	9.17E+01	1.01E+01	9.33E+00	8.98E+00	8.82E+00	8.73E+00	5.05E+00	4.67E+00	4.49E+00	4.41E+00	4.36E+00	5.35E+00	5.57E+00	5.61E+00	5.63E+00	5.64E+00
21	1.575	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	1.575	1.575	1.575	1.575	1.575	2.95E+02	2.95E+02	2.95E+02	2.95E+02	2.95E+02	8.65E+01	8.65E+01	8.65E+01	8.65E+01	8.65E+01	1.01E+01	1.01E+01	1.01E+01	1.01E+01	1.01E+01	5.05E+00	5.05E+00	5.05E+00	5.05E+00	5.05E+00	5.35E+00	5.35E+00	5.35E+00	5.35E+00	5.35E+00
21	1.575	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	1.575	1.608	1.609	1.609	1.609	2.95E+02	3.12E+02	3.16E+02	3.18E+02	3.19E+02	8.65E+01	9.03E+01	9.11E+01	9.15E+01	9.17E+01	1.01E+01	9.33E+00	8.99E+00	8.82E+00	8.72E+00	5.05E+00	4.67E+00	4.49E+00	4.41E+00	4.36E+00	5.35E+00	5.57E+00	5.61E+00	5.63E+00	5.64E+00
21	2.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	2.1	2.1	2.1	2.1	2.1	3.97E+02	3.97E+02	3.97E+02	3.97E+02	3.97E+02	1.16E+02	1.16E+02	1.16E+02	1.16E+02	1.16E+02	1.33E+01	1.33E+01	1.33E+01	1.33E+01	1.33E+01	6.66E+00	6.66E+00	6.66E+00	6.66E+00	6.66E+00	7.14E+00	7.14E+00	7.14E+00	7.14E+00	7.14E+00
21	2.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	2.1	2.125	2.126	2.126	2.126	3.97E+02	4.16E+02	4.21E+02	4.23E+02	4.25E+02	1.16E+02	1.20E+02	1.21E+02	1.21E+02	1.22E+02	1.33E+01	1.22E+01	1.17E+01	1.15E+01	1.14E+01	6.66E+00	6.10E+00	5.87E+00	5.77E+00	5.71E+00	7.14E+00	7.38E+00	7.44E+00	7.46E+00	7.48E+00
21	2.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	2.1	2.1	2.1	2.1	2.1	3.97E+02	3.97E+02	3.97E+02	3.97E+02	3.97E+02	1.16E+02	1.16E+02	1.16E+02	1.16E+02	1.16E+02	1.33E+01	1.33E+01	1.33E+01	1.33E+01	1.33E+01	6.66E+00	6.66E+00	6.66E+00	6.66E+00	6.66E+00	7.14E+00	7.14E+00	7.14E+00	7.14E+00	7.14E+00
21	2.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	2.1	2.125	2.126	2.126	2.126	3.97E+02	4.16E+02	4.21E+02	4.23E+02	4.25E+02	1.16E+02	1.20E+02	1.21E+02	1.21E+02	1.22E+02	1.33E+01	1.22E+01	1.18E+01	1.15E+01	1.14E+01	6.66E+00	6.10E+00	5.88E+00	5.77E+00	5.71E+00	7.14E+00	7.38E+00	7.44E+00	7.46E+00	7.48E+00

flowmap3.csv:

wsave [m/s	wsstd [m/s	wdave [de	x [m]					y [m]					bpitch [de					wsaveloc					rspeed [r					powave [					thrustave					tbmeqloa					bbmeqloa					rsteqload				
1	0.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.075	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1	0.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	1	1	1	1	1	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	0.3	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.48E+02	2.48E+02	2.48E+02	2.48E+02	2.48E+02	4.69E+01	4.69E+01	4.69E+01	4.69E+01	4.69E+01	6.24E+03	6.24E+03	6.24E+03	6.24E+03	6.24E+03	1.31E+03	1.31E+03	1.31E+03	1.31E+03	1.31E+03	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02
6	0.3	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	5.608	5.539	5.511	5.495	1.29E+00	1.26E+00	1.26E+00	1.26E+00	1.26E+00	2.48E+02	2.02E+02	1.93E+02	1.89E+02	1.87E+02	4.69E+01	3.95E+01	3.81E+01	3.75E+01	3.72E+01	6.24E+03	5.64E+03	5.52E+03	5.48E+03	5.45E+03	1.31E+03	1.24E+03	1.22E+03	1.22E+03	1.22E+03	1.94E+02	1.61E+02	1.55E+02	1.52E+02	1.50E+02
6	0.3	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.48E+02	2.48E+02	2.48E+02	2.48E+02	2.48E+02	4.69E+01	4.69E+01	4.69E+01	4.69E+01	4.69E+01	6.24E+03	6.24E+03	6.24E+03	6.24E+03	6.24E+03	1.31E+03	1.31E+03	1.31E+03	1.31E+03	1.31E+03	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02
6	0.3	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	5.608	5.541	5.509	5.494	1.29E+00	1.26E+00	1.26E+00	1.26E+00	1.26E+00	2.48E+02	2.02E+02	1.93E+02	1.89E+02	1.87E+02	4.69E+01	3.95E+01	3.81E+01	3.75E+01	3.72E+01	6.24E+03	5.64E+03	5.53E+03	5.47E+03	5.45E+03	1.31E+03	1.24E+03	1.22E+03	1.22E+03	1.22E+03	1.94E+02	1.61E+02	1.55E+02	1.52E+02	1.50E+02
6	0.45	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.47E+02	2.47E+02	2.47E+02	2.47E+02	2.47E+02	4.66E+01	4.66E+01	4.66E+01	4.66E+01	4.66E+01	6.24E+03	6.24E+03	6.24E+03	6.24E+03	6.24E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.96E+02	1.96E+02	1.96E+02	1.96E+02	1.96E+02
6	0.45	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	5.61	5.542	5.515	5.498	1.29E+00	1.27E+00	1.26E+00	1.26E+00	1.26E+00	2.47E+02	2.00E+02	1.91E+02	1.88E+02	1.86E+02	4.66E+01	3.92E+01	3.78E+01	3.72E+01	3.68E+01	6.24E+03	5.64E+03	5.53E+03	5.48E+03	5.45E+03	1.32E+03	1.25E+03	1.23E+03	1.23E+03	1.22E+03	1.96E+02	1.62E+02	1.56E+02	1.53E+02	1.52E+02
6	0.45	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.47E+02	2.47E+02	2.47E+02	2.47E+02	2.47E+02	4.66E+01	4.66E+01	4.66E+01	4.66E+01	4.66E+01	6.24E+03	6.24E+03	6.24E+03	6.24E+03	6.24E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.32E+03	1.96E+02	1.96E+02	1.96E+02	1.96E+02	1.96E+02
6	0.45	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	5.61	5.544	5.513	5.498	1.29E+00	1.27E+00	1.26E+00	1.26E+00	1.26E+00	2.47E+02	2.00E+02	1.92E+02	1.88E+02	1.86E+02	4.66E+01	3.92E+01	3.78E+01	3.72E+01	3.68E+01	6.24E+03	5.64E+03	5.53E+03	5.48E+03	5.45E+03	1.32E+03	1.25E+03	1.23E+03	1.22E+03	1.22E+03	1.96E+02	1.62E+02	1.56E+02	1.53E+02	1.52E+02
6	0.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.45E+02	2.45E+02	2.45E+02	2.45E+02	2.45E+02	4.63E+01	4.63E+01	4.63E+01	4.63E+01	4.63E+01	6.26E+03	6.26E+03	6.26E+03	6.26E+03	6.26E+03	1.33E+03	1.33E+03	1.33E+03	1.33E+03	1.33E+03	1.98E+02	1.98E+02	1.98E+02	1.98E+02	1.98E+02
6	0.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	5.613	5.546	5.519	5.503	1.29E+00	1.27E+00	1.26E+00	1.26E+00	1.26E+00	2.45E+02	1.98E+02	1.89E+02	1.86E+02	1.83E+02	4.63E+01	3.87E+01	3.73E+01	3.67E+01	3.64E+01	6.26E+03	5.65E+03	5.53E+03	5.49E+03	5.46E+03	1.33E+03	1.26E+03	1.24E+03	1.23E+03	1.23E+03	1.98E+02	1.64E+02	1.57E+02	1.55E+02	1.53E+02
6	0.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	6	6	6	6	6	1.29E+00	1.29E+00	1.29E+00	1.29E+00	1.29E+00	2.45E+02	2.45E+02	2.45E+02	2.45E+02	2.45E+02	4.63E+01	4.63E+01	4.63E+01	4.63E+01	4.63E+01	6.26E+03	6.26E+03	6.26E+03	6.26E+03	6.26E+03	1.33E+03	1.33E+03	1.33E+03	1.33E+03	1.33E+03	1.98E+02	1.98E+02	1.98E+02	1.98E+02	1.98E+02
6	0.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	6	5.613	5.548	5.517	5.503	1.29E+00	1.27E+00	1.26E+00	1.26E+00	1.26E+00	2.45E+02	1.98E+02	1.89E+02	1.85E+02	1.83E+02	4.63E+01	3.87E+01	3.73E+01	3.67E+01	3.64E+01	6.26E+03	5.65E+03	5.54E+03	5.48E+03	5.46E+03	1.33E+03	1.26E+03	1.24E+03	1.23E+03	1.23E+03	1.98E+02	1.64E+02	1.58E+02	1.55E+02	1.53E+02
11	0.55	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.70E+04	1.70E+04	1.70E+04	1.70E+04	1.70E+04	3.32E+03	3.32E+03	3.32E+03	3.32E+03	3.32E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03
11	0.55	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	10.176	9.936	9.842	9.79	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.67E+03	1.37E+03	1.29E+03	1.25E+03	1.24E+03	1.76E+02	1.57E+02	1.51E+02	1.49E+02	1.47E+02	1.70E+04	1.54E+04	1.49E+04	1.47E+04	1.46E+04	3.32E+03	3.04E+03	2.94E+03	2.90E+03	2.88E+03	1.06E+03	9.01E+02	8.54E+02	8.37E+02	8.27E+02
11	0.55	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.67E+03	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.76E+02	1.70E+04	1.70E+04	1.70E+04	1.70E+04	1.70E+04	3.32E+03	3.32E+03	3.32E+03	3.32E+03	3.32E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03
11	0.55	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	10.176	9.941	9.838	9.789	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.67E+03	1.37E+03	1.29E+03	1.25E+03	1.24E+03	1.76E+02	1.57E+02	1.51E+02	1.49E+02	1.47E+02	1.70E+04	1.54E+04	1.49E+04	1.47E+04	1.46E+04	3.32E+03	3.04E+03	2.95E+03	2.90E+03	2.88E+03	1.06E+03	9.01E+02	8.55E+02	8.36E+02	8.27E+02
11	0.825	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.32E+03	3.32E+03	3.32E+03	3.32E+03	3.32E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03
11	0.825	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	10.178	9.938	9.846	9.794	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.66E+03	1.35E+03	1.27E+03	1.24E+03	1.23E+03	1.75E+02	1.56E+02	1.50E+02	1.47E+02	1.46E+02	1.69E+04	1.54E+04	1.49E+04	1.47E+04	1.46E+04	3.32E+03	3.07E+03	2.98E+03	2.94E+03	2.92E+03	1.06E+03	9.00E+02	8.55E+02	8.38E+02	8.28E+02
11	0.825	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.66E+03	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.75E+02	1.69E+04	1.69E+04	1.69E+04	1.69E+04	1.69E+04	3.32E+03	3.32E+03	3.32E+03	3.32E+03	3.32E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03
11	0.825	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	10.178	9.943	9.842	9.793	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.66E+03	1.35E+03	1.28E+03	1.24E+03	1.23E+03	1.75E+02	1.56E+02	1.50E+02	1.47E+02	1.46E+02	1.69E+04	1.54E+04	1.49E+04	1.47E+04	1.46E+04	3.32E+03	3.07E+03	2.98E+03	2.94E+03	2.92E+03	1.06E+03	9.00E+02	8.56E+02	8.37E+02	8.28E+02
11	1.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.34E+03	3.34E+03	3.34E+03	3.34E+03	3.34E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03
11	1.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	10.181	9.941	9.851	9.8	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.64E+03	1.34E+03	1.26E+03	1.23E+03	1.21E+03	1.72E+02	1.54E+02	1.48E+02	1.45E+02	1.44E+02	1.68E+04	1.53E+04	1.48E+04	1.47E+04	1.45E+04	3.34E+03	3.12E+03	3.03E+03	2.99E+03	2.97E+03	1.05E+03	9.01E+02	8.57E+02	8.40E+02	8.30E+02
11	1.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	11	11	11	11	11	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.58E+00	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.64E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.34E+03	3.34E+03	3.34E+03	3.34E+03	3.34E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03
11	1.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	11	10.181	9.946	9.847	9.799	1.58E+00	1.54E+00	1.52E+00	1.52E+00	1.51E+00	1.64E+03	1.34E+03	1.26E+03	1.23E+03	1.21E+03	1.72E+02	1.54E+02	1.48E+02	1.45E+02	1.44E+02	1.68E+04	1.53E+04	1.49E+04	1.46E+04	1.45E+04	3.34E+03	3.12E+03	3.03E+03	2.99E+03	2.97E+03	1.05E+03	9.01E+02	8.57E+02	8.39E+02	8.29E+02
16	0.8	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.50E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.18E+03	3.18E+03	3.18E+03	3.18E+03	3.18E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03
16	0.8	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	15.502	15.298	15.197	15.135	1.88E+00	1.85E+00	1.84E+00	1.83E+00	1.83E+00	2.50E+03	2.51E+03	2.50E+03	2.50E+03	2.50E+03	1.67E+02	1.74E+02	1.77E+02	1.79E+02	1.79E+02	1.68E+04	1.73E+04	1.75E+04	1.76E+04	1.77E+04	3.18E+03	3.32E+03	3.37E+03	3.40E+03	3.41E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03
16	0.8	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.50E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.67E+02	1.68E+04	1.68E+04	1.68E+04	1.68E+04	1.68E+04	3.18E+03	3.18E+03	3.18E+03	3.18E+03	3.18E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03
16	0.8	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	15.502	15.301	15.194	15.135	1.88E+00	1.85E+00	1.84E+00	1.83E+00	1.83E+00	2.50E+03	2.51E+03	2.50E+03	2.50E+03	2.50E+03	1.67E+02	1.74E+02	1.77E+02	1.79E+02	1.79E+02	1.68E+04	1.73E+04	1.75E+04	1.76E+04	1.77E+04	3.18E+03	3.32E+03	3.37E+03	3.40E+03	3.42E+03	1.34E+03	1.36E+03	1.37E+03	1.37E+03	1.37E+03
16	1.2	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.70E+04	1.70E+04	1.70E+04	1.70E+04	1.70E+04	3.26E+03	3.26E+03	3.26E+03	3.26E+03	3.26E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03
16	1.2	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	15.482	15.268	15.162	15.097	1.88E+00	1.85E+00	1.84E+00	1.83E+00	1.83E+00	2.51E+03	2.51E+03	2.50E+03	2.50E+03	2.49E+03	1.69E+02	1.76E+02	1.79E+02	1.81E+02	1.81E+02	1.70E+04	1.75E+04	1.77E+04	1.78E+04	1.79E+04	3.26E+03	3.42E+03	3.48E+03	3.50E+03	3.50E+03	1.34E+03	1.36E+03	1.37E+03	1.38E+03	1.37E+03
16	1.2	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.70E+04	1.70E+04	1.70E+04	1.70E+04	1.70E+04	3.26E+03	3.26E+03	3.26E+03	3.26E+03	3.26E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03	1.34E+03
16	1.2	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	15.482	15.271	15.159	15.097	1.88E+00	1.85E+00	1.84E+00	1.83E+00	1.83E+00	2.51E+03	2.51E+03	2.50E+03	2.50E+03	2.49E+03	1.69E+02	1.76E+02	1.79E+02	1.81E+02	1.81E+02	1.70E+04	1.75E+04	1.77E+04	1.78E+04	1.79E+04	3.26E+03	3.42E+03	3.48E+03	3.50E+03	3.51E+03	1.34E+03	1.36E+03	1.37E+03	1.38E+03	1.37E+03
16	1.6	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.52E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.73E+04	1.73E+04	1.73E+04	1.73E+04	1.73E+04	3.39E+03	3.39E+03	3.39E+03	3.39E+03	3.39E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03
16	1.6	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	15.454	15.225	15.116	15.053	1.88E+00	1.85E+00	1.83E+00	1.83E+00	1.82E+00	2.52E+03	2.51E+03	2.49E+03	2.47E+03	2.46E+03	1.72E+02	1.79E+02	1.81E+02	1.81E+02	1.81E+02	1.73E+04	1.78E+04	1.79E+04	1.79E+04	1.79E+04	3.39E+03	3.56E+03	3.59E+03	3.58E+03	3.58E+03	1.35E+03	1.37E+03	1.37E+03	1.36E+03	1.36E+03
16	1.6	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	0	0	0	0	0	16	16	16	16	16	1.88E+00	1.88E+00	1.88E+00	1.88E+00	1.88E+00	2.52E+03	2.52E+03	2.52E+03	2.52E+03	2.52E+03	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.72E+02	1.73E+04	1.73E+04	1.73E+04	1.73E+04	1.73E+04	3.39E+03	3.39E+03	3.39E+03	3.39E+03	3.39E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03	1.35E+03
16	1.6	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	0	0	0	0	0	16	15.454	15.229	15.114	15.052	1.88E+00	1.85E+00	1.83E+00	1.83E+00	1.82E+00	2.52E+03	2.51E+03	2.49E+03	2.47E+03	2.46E+03	1.72E+02	1.79E+02	1.81E+02	1.81E+02	1.81E+02	1.73E+04	1.78E+04	1.79E+04	1.79E+04	1.79E+04	3.39E+03	3.56E+03	3.59E+03	3.58E+03	3.58E+03	1.35E+03	1.37E+03	1.37E+03	1.36E+03	1.36E+03
21	1.05	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.39E+04	1.39E+04	1.39E+04	1.39E+04	1.39E+04	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.41E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.05	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	10.836	10.464	10.296	10.196	21	20.735	20.642	20.6	20.575	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.25E+02	1.25E+02	1.26E+02	1.26E+02	1.39E+04	1.40E+04	1.41E+04	1.41E+04	1.41E+04	2.41E+03	2.44E+03	2.45E+03	2.45E+03	2.46E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.05	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.39E+04	1.39E+04	1.39E+04	1.39E+04	1.39E+04	2.41E+03	2.41E+03	2.41E+03	2.41E+03	2.41E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.05	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	10.836	10.47	10.29	10.195	21	20.735	20.644	20.599	20.575	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.25E+02	1.25E+02	1.26E+02	1.26E+02	1.39E+04	1.40E+04	1.41E+04	1.41E+04	1.41E+04	2.41E+03	2.44E+03	2.45E+03	2.45E+03	2.46E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.575	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.42E+03	2.42E+03	2.42E+03	2.42E+03	2.42E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.575	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	10.822	10.444	10.274	10.172	21	20.731	20.637	20.595	20.57	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.25E+02	1.26E+02	1.26E+02	1.26E+02	1.40E+04	1.41E+04	1.41E+04	1.41E+04	1.42E+04	2.42E+03	2.45E+03	2.47E+03	2.47E+03	2.47E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.575	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.23E+02	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.42E+03	2.42E+03	2.42E+03	2.42E+03	2.42E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	1.575	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	10.822	10.451	10.268	10.171	21	20.731	20.639	20.593	20.569	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.23E+02	1.25E+02	1.26E+02	1.26E+02	1.26E+02	1.40E+04	1.41E+04	1.41E+04	1.41E+04	1.42E+04	2.42E+03	2.45E+03	2.47E+03	2.47E+03	2.47E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	2.1	0	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.44E+03	2.44E+03	2.44E+03	2.44E+03	2.44E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03
21	2.1	90	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	10.802	10.417	10.242	10.139	21	20.726	20.63	20.587	20.561	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.24E+02	1.26E+02	1.26E+02	1.27E+02	1.27E+02	1.40E+04	1.41E+04	1.42E+04	1.42E+04	1.42E+04	2.44E+03	2.48E+03	2.49E+03	2.50E+03	2.50E+03	1.25E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03
21	2.1	180	1217.4	913	608.7	304.3	0	-106.5	-79.9	-53.3	-26.6	0	11.903	11.903	11.903	11.903	11.903	21	21	21	21	21	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.24E+02	1.40E+04	1.40E+04	1.40E+04	1.40E+04	1.40E+04	2.44E+03	2.44E+03	2.44E+03	2.44E+03	2.44E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03	1.25E+03
21	2.1	270	0	304.3	608.7	913	1217.4	0	-26.6	-53.3	-79.9	-106.5	11.903	10.802	10.424	10.237	10.138	21	20.726	20.632	20.586	20.561	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.51E+03	2.51E+03	2.51E+03	2.51E+03	2.51E+03	1.24E+02	1.26E+02	1.26E+02	1.27E+02	1.27E+02	1.40E+04	1.41E+04	1.42E+04	1.42E+04	1.42E+04	2.44E+03	2.48E+03	2.49E+03	2.50E+03	2.50E+03	1.25E+03	1.26E+03	1.26E+03	1.26E+03	1.26E+03

References

A.J. Brand.
Preliminary maps of wind fields and loads and energy.
FP7-ICT STREP 224548 / Aeolus Deliverable D1.3. 2009

A.J. Brand and J.W. Wagenaar.
Scale farm flow model improvements Part 1: Quasi-steady wind farm flow model - Model description.
FP7-ICT STREP 224548 / Aeolus Deliverable D1.4a. 2010

A.J. Brand and J.W. Wagenaar.
Final maps of wind fields and mechanical loads and energy output - Part 1: Quasi-steady wind farm flow model - Model description.
FP7-ICT STREP 224548 / Aeolus Deliverable D1.5a. 2010